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MARXIST VIEW OF MEDICAL CARE

HEALTH CARE IN A REVOLUTIONARY FRAMEWORK

CRITIQUE OF MODERN MEDICINE

POLITICAL ECONOMY OF HEALTH CARE

SOCIALIST HEALTH REVIEW

No. 1 June 1984

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TOWARDS A REVOLUTIONARY APPROACH TO HEALTH

Sometime during the last year, some of us working in the field of health realised that there was a need for a separate periodical which would analyse and discuss health issues from a broadly marxist perspective. *Socialist Health Review* (SHR) is being published with a conviction that it would fulfil this need by acting as a platform for discussion and helping the propagation and development of a marxist analysis of health (i. e. determinants and dynamics of health and disease) and medicine (i. e. medical technology as well as systems of medical care).

It may well be asked as to what the necessity is of a separate periodical when there exists a plethora of journals devoted to both marxism as well as health. Since the 70's various groups and individuals with different ideological positions have been working in the field of health. Many health workers, and doctors have, through their exposure to people's struggles to change the oppressive social reality, been attracted to the left movement and specifically to marxism. They have come to realise the need for a substantial, radical critique of health and medicine. Moreover, most marxist doctors, health workers in India are more or less ignorant about marxist analysis of health and medicine. But with the growth of the health and science movements in India, we have all increasingly felt the need to know and to develop a marxist analysis of health and medicine. At the same time, many political activists and social workers too, as a result of their exposure to health problems have realised the relevance of such an exercise. The growth of people's science movements in the country (e. g. Lok Vignyan Sangathana in Maharashtra, Kerala Shastra Sahitya Parishad, Kerala) has also contributed to this awareness. Activists of these movements have been exposed to, and have also challenged the existing health and medical care system and consequently, have realised the need for analysing them. All these developments have resulted in generating an awareness amongst medicos, social workers and political activists of the relevance of radical health praxis to the left movement.

Such an analysis not only advances the general theory of radical political action — which we believe to be critical for any fundamental change in the health situation — but also provides a specific theoretical direction for radical health action. As of today, in India, there is little understanding of various theoretical questions related to health and medicine: the political economy; the bourgeois, male dominated ideological positions; underlying positivist outlook etc. As argued earlier, the need to develop such a theory through mutual discussions and debates does exist. Given the geographical distances that separate us, the best solution the situation offers is a periodical.

Now, it could be argued that existing forums like the *Medico Friends Circle Bulletin* could be utilised for this purpose. We feel that periodicals like these have played and will continue to play the very purposeful role of exposing socially conscious individuals to concrete alternatives and in developing a radical democratic critique of health and medicine. But, they have an inherent limitation in that the divergent or sometimes equivocal ideological commitments of their readership makes a discussion from a particular ideological standpoint, especially the marxist one, a a futile affair. Even when it does take place, much of the rigour is lost.

Periodicals like the *EPW, and Social Scientist*, while publishing marxist analyses of society have an obvious limitation in that they cover a wide field and therefore, they cannot become platforms for continuous debates on health and medicine only.

This in short, is the *raison d'etre* of a separate periodical devoted to propagating and developing a marxist theory of health and medical care, a task which SHR proposes to undertake.

Editorial Policy

As stated earlier SHR will function as a forum for propagating and developing a marxist approach to health and medicine. By a marxist approach we mean that analytical approach which takes a historical materialist and dialectical view of the health of a people and the medical care system in a given social order. From a marxist standpoint, health can be considered as a part and consequence of economic, political and socio-cultural development of society. The problems of health and the health care system reflect the problems of the dialectic of production forces and production relations and the broader social order based on it. They cannot be separated from the problems of this broader social order. As health care and medicine operate today

through public institutions and private clinics, insights into who controls them and how this control operates is significant for such an approach. The role played by these institutions in social control and reinforcement of the existing ideology would be the focus of such an analytical approach.

The editorial policy will aim to present the various currents which have contributed to the development of such an approach to health and medicine. It must be emphasised here that in our opinion, there does not exist one single, marxist analysis — an all correct perfect 'line' so to say, of health and medicine. Only a continuous interaction at the level of praxis amongst the different trends within the marxist movement can lead to the process of distilling the truth. Therefore, SHR will contain articles and viewpoints reflecting this diversity in marxist thought albeit with the limitations spelt out later.

We believe that the women's health movement has added a new dimension to the critique of the organisation and contents of medicine. Therefore, SHR will also contain reflections mainly of the marxist-feminist viewpoint — and sometimes even of the non-marxist ones — directed towards the exposure of the ideological substructure of the developments in medicine.

The Illichian trend is characterised by its criticism of the bureaucratising and centralising tendency of modern health care systems, while overlooking the class basis of these tendencies. It has nevertheless contributed to the critical views on medical care in bourgeois society. This is despite the fact that this criticism arises from within the bourgeois ideological standpoint. Occasionally, this current may, too, find a place in this periodical.

These three points of view have one common direction : they oppose the existing ideological position dominant in the sociology of medicine, one rooted in the structural-functional school. This school assumes the neutrality of medicine (and all sciences) and examines the health care systems without reference to the character of society. It refrains from a political analysis of the medical system and places great emphasis on the social factors affecting health without enquiring into the root cause of their existence, the economic base of society.

It is this commonality that forms the justification for including them together in this periodical.

Of late, there has been a spurt in the literature on the marxist analysis of health and medicine in the US and other western countries. Many of us are not exposed to these, as not all of us have an easy access to the relevant reading material. Therefore, the periodical will contain reproductions of such articles with introductory comments whenever necessary.

In order to develop a 'concrete analysis of the concrete situation', SHR would encourage publishing of original articles pertaining to the Indian situation and debates and comments thereupon. We hope that in a short time, original articles will form the bulk of the periodical.

Keeping in view the development of the Indian marxist movement in general, the following, in our view must be strictly observed while writing original articles:

1. The central propositions of the articles must be worked out logically with supporting empirical evidence.

2. Subsidiary propositions and other general statements regarding the economic and political situation, for example, the nature of mode of production in India, strategies of revolution etc. must have a direct bearing on the central propositions. This is imperative in order to avoid a debate on these issues on the pages of this periodical (though these are obviously essential for political activists) and to prevent irrelevant generalisations.

In addition to these main articles, SHR will also contain features like news, book reviews, field reports, letters to the editor and so on.

SHR's relation to the left movement : SHR being a periodical devoted to theoretical aspects of health and medicine does not propose to become an action-oriented periodical in the sense of an organiser of an action group. We believe that the formulation and clarification of these theoretical issues are essential for successful, politically relevant action and in that way the periodical would facilitate effective health action in the manner after journals like *Monthly Review* or *Social Scientist*.

We feel that the very fact of the need for such a periodical having been felt indicates that the health movement within the broad left movement has reached a stage of maturity though not of a level necessitating a formal organisation. But, this does not and cannot, preclude the possibility of formation of such an organisation in future.

At present, SHR would contribute to the general fund of marxist analyses which is particularly deficient in this respect in India. We consider this

deficiency, even mistakes and distortions within the left movement, as our deficiency, mistakes and distortions. And if they have to be criticised — which of course, they need to be — the criticism should be a self-criticism, with a view to improve upon the past and the present so that the movement proceeds with unity, strength and on a politically correct path towards its historical goal. Let me make it clear that we do not stand for a goody-goody, come-what may-we-shall-stay-united type of left unity but we certainly oppose the kind of sectarianism that leads us to mutual mud-slinging while the enemy without goes unexposed and unchallenged.

In this issue

To drive home the point made above regarding the relationship of the problems of health and medicine with those of society in general, we open our publication with an overview of Health and Politics.

In any class society, and by the same logic, in bourgeois society, every institution is controlled by a class/classes to further its/their own interests against certain other class/classes. Under the hegemony of the bourgeois, health has become a commodity and consequently, there has been a proliferation of health 'producing' institutions and businesses. And according to the same logic, they are controlled by the bourgeoisie to perpetuate and justify their hegemony. The articles appearing in this inaugural issue set the keynote of the marxist approach to health and medicine.

Howard Waitzkin in his article (a reproduction) *A Marxist View of Medical Care* reviews marxist literature on health and medicine. The article shows how the present health system reflects the class structure of captalist society and how this class structure manifests itself in various ways: control over health institutions, stratification of health workers, health policy etc. He goes on further to show the penetration of monopoly capital into the 'medical-industrial complex'. The article deals briefly with the concepts of historical materialist epidemiology focussing on the effects of economic cycles, social stress, working conditions and sexism on health.

Amar Jesani and Padma Prakash in their article *Political Economy of Health Care in India* select one aspect of the relationship of health and politics and put it in the Indian perspective. They lucidly trace the connection between the economic base of Indian society and health system.

Binayak Sen's article focusses on areas which have either been dealt with only superficially in Waitzkin's article or not at all.

Anant Phadke introduces the book *Cultural Crisis of Modern Medicine* edited by John Ehrenreich, with his critical comments thereupon.

From this issue onwards, each issue will be devoted to one aspect of health and medicine.

An Appeal

Our reader friends would agree that building up a platform for the task envisaged by SHR requires a lot of collective effort. We appeal to our comrades to accept this challenge and extend their fraternal support to this venture. There are several ways in which SHR could be helped:

As with any other publication of this type, SHR too, badly needs financial support. Although several friends have promised to collect funds, the total amount would just be barely sufficient for the first few issues only. Financial support for SHR could be enlisted by either enrolling subscribers or collecting donations.

In case, you are unable to contact a person whom you know would be interested, his/her address could be sent to us. We would send the first issue with an appeal for subscription/donation.

Original articles or reproductions including theoretical analyses, relevant research papers, reports of alternatives in health care, reports of health care in post-revolutionary societies, book reviews etc. could be sent to us for publication. (See back cover).

SHR is a platform of discussion. Hence opinions of the readers regarding the production of the periodical material published and of course, the views presented here are welcome — nay, necessary for the growth of this periodical.

If one goes by the enthusiastic response we have received so far it would not be too much to hope that the Socialist Health Review in a short time, would become a leading theoretical organ of the growing health movement within our country and would contribute significantly to the general fund of marxist literature.

Dhruv Mankad

A MARXIST VIEW OF MEDICAL CARE

howard waitzkin

Marxist studies of medical care emphasise political power and economic dominance in capitalist society. Although historically the marxist paradigm went into eclipse during the early twentieth century, the field has developed rapidly during recent years. The health system mirrors the society's class structure through control over health institutions, stratification of health workers, and limited occupational mobility into health professions. Monopoly capital is manifest in the growth of medical centres, financial penetration by large corporations, and the "medical-industrial complex." Health policy recommendations reflect different interest groups' political and economic goals. The state's intervention in health care generally protects the capitalist economic system and the private sector. Medical ideology helps maintain class structure and patterns of domination. Comparative international research analyses the effects of imperialism, changes under socialism, and contraditions of health reform in capitalist societies. Historical materialist epidemiology focuses on economic cycles, social stress, illness-generating conditions of work, and sexism. Health praxis, the disciplined uniting of study and action, involves advocacy of "nonreformist reforms" and concrete types of political struggle.

This review surveys the rapidly growing marxist literature in medical care. The marxist viewpoint questions whether major improvements in the health system can occur without fundamental changes in the broad social order. One thrust of the field, an assumption also accepted by many non-marxists, is that the problems of the health system reflect the problems of our larger society and cannot be separated from those problems.

Marxist analyses of health care have burgeoned in the United States during the past decade. However, it is not a new field. Its early history and the reasons for its slow growth until recently deserve attention.

Historical Development of the Field

The first major marxist study of health care was Engel's *The Condition of the Working Class in England* (1), originally published in 1845, three years before Engels coauthored with Marx *'The Communist Manifesto'* (2). This book described the dangerous working and housing conditions that create ill health. In particular, Engles traced such diseases as tuberculosis, typhoid and typhus to malnutrition, inadequate housing, contaminated water supplies and overcrowding. Engels' analysis of health care was part of a broader study of working class conditions under capitalist industrialisation. But this treatment of health problems was to have a profound effect on the emergence of social medicine in Western Europe, particularly the work of Rudolf Virchow.

Virchow's pioneering studies in infectious disease, epidemiology, and "social medicine" (a term Virchow popularised in Western Europe) appeared with great rapidity after the publication of Engels' book on the English working class. Virchow himself acknowledged Engels' influence on his thought. In 1847, at the request of the Prussian government, Virchow investigated a severe typhus epidemic in a rural area of the country. Based on this study, Virchow recommended a series of profound economic, political, and social changes that included increased employment, better wages, local autonomy in government, agricultural cooperatives, and a more progressive taxation structure. Virchow advocated no strictly medical solutions, such as more clinics or hospitals. Instead, he saw the origins of ill health in social problems. The reasonable approach to the problem of epidemics, then, was to change the conditions that permitted them to occur. (4,5.)

During this period Virchow was committed to combining his medical work with political activities. In 1848 he joined the first major working-class revolt in Berlin. During the same year he strongly supported the short-lived revolutionary efforts of the Paris Commune (6-8). In his scientific investigations and in his political practice, Virchow expressed two overriding themes. First, the origin of disease is multifactorial. Among the most important factors in causation are the material conditions of people's everyday lives. Second, an effective health-care system cannot limit itself to treating the pathophysiologic disturbances of individual patients. Instead, to be successful, improvements in the health care system must coincide with fundamental economic, political and social changes. The latter changes often impinge on the privileges of wealth and power enjoyed by the dominant classes of society and thus, encounter resistance. Therefore, in Virchow's view, the responsibilities of the medical scientist frequently extend to direct political action.

After the revolutionary struggles of the late 1840s suffered defeat, Western European governments heightened their conservative and often

repressive social policies. Marxist analysis of health-care entered a long period of eclipse. With the onset of political reaction, Virchow and his colleagues turned to relatively uncontroversial research in laboratories and to private practice.

During the late nineteenth century, with the work of Ehrlich, Koch, Pasteur, and other prominent bacteriologists, germ theory gained ascendancy and created a profound change in medicine's diagnostic and therapeutic assumptions. A unifactorial model of disease emerged. Medical scientists searched for organisms that cause infections and single lesions in non-infectious disorders. The discoveries of this period undeniably improved medical practice. Still, as numerous investigators have shown, the historical importance of these discoveries has been overrated. For example, the major declines in mortality and morbidity from most infectious diseases preceded rather than followed the isolation of specific etiologic agents and the use of antimicrobial therapy. In Western Europe and the United States, improved outcomes in infections occurred after the introduction of better sanitation, regular source of nutrition, and other broad environmental changes. In most cases, improvements in disease patterns antedated the advances of modern bacteriology (9-17).

Why did the unifactorial perspective of germ theory achieve such prominence ? And why have the investigational techniques that assume specific etiology and therapy retained a nearly mythic character in medical science and practice to the present day ? A serious historical reexamination of early twentieth century medical science, which attempts to answer these questions, has begun only in the past few years. Some preliminary explanations have emerged; they focus on events that led to and followed publication of the Flexner Report (18).

The Flexner Report has been held in high esteem as the document that helped change modern medicine from quackery to responsible practice. One underlying assumption of the report was the laboratory based scientific medicine, oriented especially to the concepts and methods of European bacteriology, produced higher quality and more effective medical practice. Although the comparative effectiveness of various medical traditions (including homoeopathy, traditional folk healing, chiropractic, and so forth) had never been subjected to systematic test, the report argued that medical schools not oriented to scientific medicine fostered mistreatment of the public. The report called for the closure or restructuring of schools that were not equipped to teach laboratory-based medicine. The report's repercussions were swift and dramatic. Scientific, laboratory-based medicine became the norm for medical education, practice, research and analysis.

Recent historical studies cast doubt on assumptions in the Flexner Report that have comprised the widely accepted dogma of the past half century. They also document the uncritical support that the report's recommendations received from parts of the medical profession and the large private philanthropies (19-27). At least partly because of these events, the marxist orientation in medical care remained in eclipse.

Although some of Virchow's works gained recognition as classics, the multifactorial and politically oriented model that guided his efforts has remained largely buried. Without doubt, marxist perspectives had important impacts on health care outside Western Europe and the Untied States. For example, Lenin applied these perspectives to the early construction of the Soviet health system (28). Salvador Allende's treatise on the political economy of health care, written while Allende was working as a public health physician exerted a major influence on health programmes in Latin America (29). The Canadian surgeon, Norman Bethune, contributed analyses of tuberculosis and other diseases, as well as direct political involvement, that affected the course of post-revolutionary Chinese medicine (30-32). Che Guevara's analysis of the relations among politics, economics and health care — emerging partially from his experience as a physician — helped shape the Cuban medical system (33,34).

Perhaps reflecting the political ferment of the late 1960s and widespread dissatisfaction with various aspects of modern health systems (35), serious marxist scholarship of health care has grown rapidly. Recent work began in Western Europe (36,37) and spread to the United States with the publication of Kelman's path-breaking article in 1971 (38). The following sections of this review focus on current areas of research and analysis.

Class Structure

Marx's definitions of social class emphasised the social relations of economic production. He noted that one group of people, the capitalist class or bourgeoisie, own or control (or both) the means of production : the machines, factories, land, and raw materials necessary to make products for the market. The working class or proletariat, who do not own or control the means of production, must sell their labor for a wage. But the value of the product that workers

produce is always greater than their wage (39). Workers must give up their product to the capitalist; by losing control of their own productive process, workers become subjectively "alienated" from their labor (40). "Surplus value", the difference between the wage paid to workers and the value of the product they create, is the objective basis of the capitalist's profit. Surplus value also is the structural source of "exploitation"; it motivates the capitalist to keep wages low, to change the work process (by automation and new technologies, close supervision, lengthened work day or overtime, speed-ups and dangerous working conditions), and to resist workers' organized attempts to gain higher wages or more control in the workplace (41).

Although they acknowledge the historical changes that have occurred since Marx's time (52-51), recent marxist studies have reaffirmed the presence of highly stratified class structures in advanced capitalist societies and Third World nations (52-54). Another topic of great interest is the persistence or reappearance of class structure, usually based on expertise and professionalism, in countries where socialist revolutions have taken place (55,56); a later section of this review focuses on that problem. These theoretical and empiricial analyses show that relations of economic production remain a primary basis of class structure and a reasonable focus of strategies for change (57-59).

Miliband's (59) definitions of social class have provided a framework for marxist research on class structure in the health system. This research has shown that the health system mirrors the class structure of the broader society (60-63).

The "corporate class" includes the major owners and controllers of wealth. They comprise 1% of the population and own 80% of all corporate stocks and state and local government bonds; their median annual income (1975 estimates) is 114000 dollars to 142000 dollars. The "working class", at the opposite end of the scale, makes up 49% of the population. It is composed of annual laborers, service workers, and farm workers, who generally earn 8500 dollars per year or less. Between these polar classes are the "upper middle class" (professionals like doctors, lawyers, and so forth, comprising 14% of the population and earning about 25600 dollars; and middle-level business executives, 6% of the population and earning about 22700 (dollars; and the "lower middle class" (shopkeepers, self-employed people, craftsmen, artisans, comprising 7% of the population, earning about 12000 dollars and clerical and sales workers, 23%of the population, earning about 9200 dollars per year). Although these definitions provide summary descriptions of a very complex social reality, they are useful in analysing manifestations of class structure in the health system.

Control over Health Institutions

Navarro (60-62) has documented the pervasive control that members of the corporate and upper middle classes exert within the policy-making bodies of American health institutions (Table 1). These classes predominate on the governing boards of private foundations in the health system, private and state medical teaching institutions, and local voluntary hospitals. Only on the boards of state teaching institutions and voluntary hospitals do members of the lower middle class or working class gain any appreciable representation; even there, the participation from these classes falls far below their proportion in the general population. Local research has documented corporate control of health institutions in many parts of the United States. Navarro has argued, based partly on these observations,

Table 1 : Social Class Composition of U.S. Labor Force and Boards of U.S. health institutions

	Class* (%)			
	Corporate	Upper middle	Lower middle	Working
U.S. labor force	1	20	30	49
Board members				
Foundations	70	30	—	—
Private medical teaching institutions	45	55	—	—
State medical teaching institutions	20	70	10	—
Voluntary hospitals	5	80	10	5

*See text for definitions : source, Navarro V; Social policy issues : an expalanation of the composition, nature, and functions of the present health sector of the United States. Bull NY Acad Med 51:199-234, 1975 (Reference 60).

that control over health institutions reflects the same patterns of class dominance that have arisen in other areas of American economic and political life.

Stratification within Health Institutions

As members of the upper middle class, physicians occupy the highest stratum among workers in health institutions. Composing 7% of the health labor force, physicians receive median net income (approximately 53900 dollars in 1975) that places them in the upper 5% of the income distribution of the United States. Under physicians and professional administrators are members of the lower middle class: nurses, physical and occupational therapists, and technicians. They make up 29% of the health labor force, are mostly women, and earn about 3500 dollars. At the bottom of institutional hierarchies are clerical workers, aides, orderlies, and kitchen and janitorial personnel, who are the working class of the health system. They have an income of about 700 dollars per year, represent 54% of the health labor force, and are 84% female and 30% black (60,63).

Recent studies have analysed the forces of professionalism, elitism, and specialisation that divide health workers from each other and prevent them from realising common interests. These patterns affect physicians (64), nurses (65, 66), and technical and service workers who comprise the fastest growing segment of the health labor force (67-72). Bureaucratisation, unionisation, state intervention, and the potential "proletarianisation" of professional health workers may alter future patterns of stratification (73).

Occupational Mobility

Class mobility into professional positions is quite limited. Investigations of physicians' class background in both Britain and the United States have shown a consistently small representation of the lower middle and working classes among medical students and practising doctors (23, 24, 74, 75). In the United States, historical documentation is available to trace changes in class mobility during the twentieth century. As Ziem (23, 24) has found despite some recent improvements for other disadvantaged groups like blacks and women, recruitment of working class medical students has been very limited since shortly after publication of the Flexner Report. In 1920, 12% of medical students came from working class families, and this percentage has stayed almost exactly the same until the present time.

Emergence of Monopoly Capital in the Health Sector

During the past century, economic capital has become more concentrated in a smaller number of companies, the monopolies. Monopoly capital has emerged in essentially all advanced capitalist nations, where the process of monopolisation has reinforced private corporate profit (70, 76, 78) (In a much different form monopolisation also occurs within socialist countries, where the state owns major capital assets and strongly limits private profitability). Monopoly capital has become a prominent feature of most capitalist health systems and is manifest in several ways.

Medical Centers

Since about 1910, a continuing growth of medical centers has occurred, usually in affiliation with universities. Capital is highly concentrated in these medical centres, which are heavily oriented to advanced technology. Practitioners have received training where technology is available and specialisation is highly valued. Partly as a result, health workers are often reluctant to practise in areas without easy access to medical centers. The nearly unrestricted growth of medical centers, coupled with their key role in medical education and the "technologic imperative" they encourage, has contributed to the maldistribution of health workers and facilities throughout the United States and within regions (38, 64).

Finance Capital

Monopoly capital also has been apparent in the position of banks, trusts and insurance companies, the largest profit making corporations under capitalism. For example, in 1973, the flow of health-insurance dollars through private insurance companies was 29 billion, about half of the total insurance sold. Among commercial insurance companies, capital is highly concentrated; about 60% of the health-insurance industry is controlled by the 10 largest insurers. Metropolitan Life and Prudential each control more than 30 billion dollars in assets, more than General Motors, Standard Oil of New Jersey, or International Telephone and Telegraph (60).

Finance capital figures prominently in current health reform proposals. Most plans for national health insurance would permit a continuing role for the insurance industry (79,80). Moreover, corporate investment in health maintenance organisations is increasing, under the assumption that national

health insurance, when enacted, will assure the profitability of these ventures (81.)

The "Medical-Industrial Complex"

The "military-industry complex" has provided a model of industrial penetration in the health system popularised by the term, "medical-industrial complex." Investigations by the Health Policy Advisory Center (82,83) and others have emphasised that the exploitation of illness for private profit is a primary feature of the health systems in advanced capitalist societies (64). Recent reports have criticised the pharmaceutical and medical equipment industries for advertising and marketing practices (82-86), price and patent collusion (87), marketing of drugs in the third world before their safety is tested (88-89), and promotion of expensive diagnostic and therapeutic innovations without controlled trials showing their effectiveness (13,90-91).

In this context, "cost-effectiveness" analysis has yielded useful appraisals of several medical practices and clinical decision-making, based in part on analysis of cost relative to effectiveness (94-100). Although recognising its contributions, marxist researchers have criticised the cost-effectiveness approach for asking some questions at the wrong level of analysis. This approach usually does not help clarify the overall dynamics of the health system that encourages the adoption of costly and ineffective technologic innovations. The practice evaluated by cost-effectiveness research generally emerges with the growth of monopoly capital in the health system. Costly innovations often are linked to the expansion of medical centers in the health system, and the promotion of new drugs, the penetration of finance capital and instrumentation by medical industries. Cost-effectiveness research and clinical decision analysis remain incomplete unless they consider broader political and economic trends that propel apparent irrationalities in the health system (90).

Interest Group Politics

Marx argued that class position and economic resources usually determine political power. He noted that the dominant economic class is composed of various groups with sometimes different interests. Although these groups unite when they face basic threats from the working class, their varying interests generate contradictions that can provide a focus for political strategy (101-105). In studies of health care, the analysis of interest group politics has focussed mainly on the United States and Great Britain (106-110). This approach demystifies the policy recommendations of many groups advocating health reforms. From this perspective these groups' viewpoints and proposals reflect largely their own political and economic interests, rather than simple concern for improving the health system.

Alford's (106,107) research delineates three major interest groups vying for power and finances. The professional monopolists include physicians, specialists, and health research workers in medical schools, universities, or private practice. The main consequence of their activity is a "continuous proliferation of programs and projects" that "provide a symbolic screen of legitimacy while maintaining power relationships" in the health system. 'Corporate rationalisers' are persons in top positions within health organisations: hospital administrators, medical school deans, and public health officials. The corporate rationalisers' overall effect, according to Alford, is to complicate and elaborate the bureaucratic structures of the health system. As third interest group is the diverse community population actually needing and affected by health services. Generally, Alford observes, this interest group's efforts are likely to fail. A high probability of cooptation means that leaders may assume symbolic positions on advisory boards or planning agencies, without real change in power structures.

The analysis of interest group politics has proved helpful in understanding local controversies such as attempts at community control of health institutions (111); conflicts among the governing boards, administrators and professional staffs of hospitals (112); failures in comprehensive health planning and regulation (113-116); and the expansion of medical institutions into urban residential areas (117-120). A similar perspective has led to a clearer picture of national health policy decisions, for example, those pertaining to cancer research and occupational health legislation (83-123).

These studies' implications for reform within the present system tend to be pessimistic. Because an "institutional and class structure creates and sustains the power of the professional monopolists and corporate rationalisers". Alford writes, "change is not likely without the presence of a social and political movement which rejects the legitimacy of the economic and social base of pluralist politics." (106).

The State and State Intervention

Because the state encompasses the major institutions of political power, its strategic importance is obvious. The state acts generally to repress

revolutionary social change or political action that threatens the present system in any fundamental way after socialist revolutions, the state apparatus must persist for a long time, but with greatly modified functions. Before focussing on health care, a brief overview and definition of the state are necessary.

Marx and Engels emphasised government's crucial role is protecting the capitalist economic system and the interests of the capitalist class. The famous homily of The Communist Manifesto, was "the state is the executive committee of the bourgeoisie" (2). Lenin (124) concluded that the capitalist class would intervene forcibly to block any electoral victory that seriously threatened the private enterprise system. More recent analysts have studied the structural patterns that preserve the dominance of the capitalist class over state policies (53, 59), the mechanisms by which the state eases the recurrent economic crises of the capitalist system (125-127); and ideologic techniques by which the state reinforces popular acquiescence (128, 129).

In this context the following definition, though limited by the subject's complexity, is appropriate. The state comprises the interconnected public institutions that act to preserve the capitalist economic system and the interests of the capitalist class. This definition includes the executive, legislative, and judicial branches of government, the military; and the criminal justice system all of which hold varying degrees of coercive power. It also encompasses relatively noncoercive institutions within the educational, public welfare, and health-care systems. Through such noncoercive institutions, the state offers services or conveys ideologic messages that legitimate the capitalist system. Especially in periods of economic crisis, the state can use these same institutions to provide public subsidisation of private enterprise.

The Private-Public Contradiction

Within the health system, the "public sector," as part of the state, operates through public expenditures and employs health workers in public institutions. The "private sector" is based in private practice and companies that manufacture medical products or control finance capital. Nations vary greatly in the private-public duality. In the United States, a dominant private sector coexists with an increasingly large public sector. The public sector is even larger in Great Britain and Scandinavia. In Cuba and China, the private sector essentially has been eliminated (64).

A general theme of Marxist analysis is that the private sector drains public resources and health workers' time, on behalf of private profit and to the detriment of patients using the public sector. This framework has helped to explain some of the problems that have arisen in such countries as Great Britain (75) and Chile (130, 131), where private sectors persisted after the enactment of national health services. In these countries, practitioners have faced financial incentives to increase the scope of private, practice, which they often have conducted within public hospitals or clinics. In the United States, the expansion of public payment programs such as Medicare and Medica aid has led to increased public subsidisation of private practice and private hospitals, as well as abuses of these programs by individual practitioners (64).

Similar problems have undermined other public health programs. These programs frequently have obtained finances through regressive taxation, placing low-income taxpayers at a relative disadvantage (79). Likewise, the deficiencies of the Blue Cross and Blue Shield insurance plans have derived largely from the failure of public regulatory agencies to control payments to practitioners and hospitals in the private sector (132). When enacted, national health insurance also would use public funds to reinforce and strengthen the private sector, by assuring payment for hospitals and individual physicians and possibly by permitting a continued role for commercial insurance companies (64, 80).

Throughout the United States the problems of the private-public contradition are becoming more acute. In most large cities, public hospitals are facing cutbacks, closure, or conversion to private ownership and control. This trend heightens low-income patients' difficulties in finding adequate health care (133). It also reinforces private hospitals' tendency to "dump" low-income patients to public institutions (134).

General Functions of the State within the Health System.

The state's functions in the health system have increased in scope and complexity. In the first place, through the health system, the state acts to legitimate the capitalist economic system based in private enterprise (135, 136). The history of public health and welfare programs shows that state expenditures usually increase during periods of social protest and decrease as unrest becomes less widespread (137, 138). Recently a Congressional committee summarised public opinion surveys that uncovered a profound level of dissatisfaction with

government and particularly with the role of business interests in government policies: " . . . citizens who thought something was 'deeply wrong' with their country had become a national majority ... And, for the first time in the ten years of opinion sampling by the Horris Survey, the growing trend of public opinion towards disenchantment with government swept more than half of all Americans with it" (139). Under such circumstances, the state's predictable response is to expand health and other welfare programs. These incremental reforms, at least in part, reduce the legitimacy crisis of the capitalist system by restoring confidence that the system can meet the people's basic needs. The cycles of political attention devoted to national health insurance in the United States appear to parallel cycles of popular discontent (135). Recent cutbacks in public health services to low-income patients follow the decline of social protest by low-income groups since the 1960s.

The second major function of the state in the health system is to protect and reinforce the private sector more directly. As previously noted most plans for national health insurance would permit a prominent role and continued profits for the private insurance industry, particularly in the administration of payments, record keeping, and data collection (64,80, 140). Corporate participation in new health initiatives sponsored by the state — including health maintenance organisations, preventive screening programs, computerised components of professional standards review organisations, algorithm and audiovisual aids for patient education programs — is providing major sources of expanded profit (81, 141).

A third (and subtler) function of the state is the reinforcement of dominant frameworks in scientific and clinical medicine that are consistent with the capitalist economic system and the suppression of alternative frameworks that might threaten the system. The United States government has provided generous funding for research on the pathophysiology and treatment of specific disease entities. As critics even within government have recognised, the disease-centered approach has reduced the level of analysis to the individual organism and, often inappropriately, has stimulated the search for unifactorial rather than multifactorial origin (142). More recently, analyses emphasising the importance in individul "life-style" as a cause of disease (14, 143, 144) have received prominent attention from state agencies in the United States and Canada (145, 146). Clearly individual differences in personal habits do affect health in all societies. On the other hand, the lifestyle argument, perhaps even more than the earlier emphasis on specific cause, obscures important sources of illness and disability in the capitalist work process and industrial environment; it also puts the burden of the health squarely on the individual, rather than seeking collective solutions to health problems (147, 148).

The issues that the state has downplayed in its research and development programs are worth noting. For example, based on available data, it is estimated that in Western industrialised societies environmental factors are involved in the etiology of approximately 80% of all cancer (149). In its session on "health and work in America," the American Public Health Association in 1975 produced an exhaustive documentation of common occupational carcinogens (150). A task force for the Department of Health, Education, and Welfare on *Work in America*, published by a nongovernment press in 1973, reported "In an impressive 15-year study of aging, the strongest predictor of longevity was work satisfaction. The second best predictor was overall 'happiness'... Other factors are undoubtedly important — diet, exercise, medical care, and genetic inheritance. But research findings suggest that these factors may account for only about 25 per cent of the risk factors in heart disease, the major cause of death... "(151). Such findings are threatening to the current organisation of capitalist production. They have received little attention or support from state agencies. A framework for clinical investigation that links disease directly to the structure of capitalism is likely to face indifference and active discouragement from the state.

Limits and Mechanisms of State Intervention

State intervention faces certain structural limits. Simply summarised, these limits restrict state intervention to policies and programs that will not conflict in fundamental ways with capitalist economic processes based on private profit, or with the concrete interests of the capitalist class during specific historical periods.

"Negative selection mechanisms" are forms of state intervention that exclude innovations or activities that challange the capitalist system (125, 126). For example, agencies of the state may enact occupational health legislation and enforcement regulations. However, such reforms will never reach a level strict enough to interfere with profitability in specific industries. Nor will state ownership of industries responsible for occupational or

environmental diseases occur to any major degree (135).

Negative selection also applies to the potentialalisation of the health system as a whole. In most capitalist societies, the state generally has opposed structural changes that infringe on private medical practice; private control of most hospitals; and the profitability of the pharmaceutical, medical equipment, insurance, and other industries operating in the health system. While excluding nationalisation through negative selection, the state sponsors incremental reforms that control excesses in each of these spheres, thus maintaining the legitimacy of the whole. As an example of negative selection congressional deliberations in the United States systematically exclude serious consideration of health service (as opposed to national health insurance) that mignt question the appropriateness of private medical practice or the nationalisation of hospitals (152). Another example is governmental regulation of the drug and insurance industries; aside from its erratic effects, state regulation rules out public ownership of these industries.

The state also can use "positive selection mechanisms" that promote and sponsor policies strengthening the private enterprise system and the interests of capital (125, 126). The positive selection of financial reforms like health insurance, for instance, contrasts sharply with the exclusion of organisational reforms that might change the broader political and economic structures of the present system (135).

Medical Ideology

Ideology is an interlocking set of ideas and doctrines that form the distinctive perspective of a social group. Marx introduced a distinction between two levels of social structures. The "infrastructure", or "economic base," comprises the concrete relations of economic production; social class, as determined by ownership or control of the means of production, or both, is the primary feature of the infrastructure On the other hand, the "superstructure" includes governmental and legal institutions. as well as the dominant ideologies of a specific historical period (39). The events of history, in the Marxist perspective emerge mainly from economic forces; this "economic determinancy" gives causal primacy to the sphere of production and class conflict. Thus, the economic infrastructure generally determines features of the superstructure. Ideology and other parts of the superstructure, however, help sustain and reproduce the social relations of production and, especially, patterns of domination (153, 154). Marxist analysis emphasises the subtle "ideologic hegemony" by which institutions of civil society (schools, church, family, and so forth) promulgate ideas and beliefs, that support the established order (129, 155); the "ideologic apparatuses" that the capitalist class uses to pressurise state power (128); and the ideologic features of modern science that legitimate social policy decisions made by "experts" in the interests of the dominant class (156).

Along with other institutions such as the educational system, family, mass media, and organised religion, medicine promulgates an ideology that helps maintain and reproduce class structure and patterns of domination. Medicine's ideologic feature in no way diminish the efforts of individuals who use currently accepted methods in their clinical work and research. Nevertheless, medical ideology, when analysed as part of the broad social superstructure, has major social ramifications beyond medicine itself (157). Recent studies have identified several components of modern medical ideology.

Disturbances of Biological Homeostasis are Equivalent to Breakdowns of Machines

Modern medical science views the human organism mechanistically. The health professional's advanced training permits the recognition of specific causes and treatments for physical disorders. The mechanistic view of the human body deflects attention from multifactorial origin, especially causes of diseases that derive from the environment, work processes, or social stress. It also reinforces a general ideology that attaches positive evaluation to industrial technology under specialised control (5, 135, 158, 159).

Disease is a Problem of the Individual Human Being

The unifactorial model of disease contains reductionist assumptions, because it focusses on the individual rather than the illness-generating conditions of society. More recently, a similar reductionist approach has discovered sources of illness in lifestyle. In both cases, the responsibility for disease and cure rests at the individual rather than the collective level. In this sense medical science offers no basic critical approach of class structure and relations of production, even in the implications for health and illness (135, 159).

Science Permits the Rational Control of Human Beings

The natural sciences have led to a greater control over nature. Similarly, it is often assumed that

modern medicine, by correcting defects of individuals, can enhance their controllability. The quest for a reliable work force has been one motivation for the support of modern medicine by capitalist economic interests (19, 26). Physicians' certification of illness historically has expanded or contracted to meet industry's need for labor (160, 161). Thus, medicine is seen as contributing to the rational governance of society, and managerial principles increasingly are applied to the organization of the health system (113-115).

Many Spheres of Life are Appropriate for Medical Management

This ideologic assumption has led to an expansion of medicine's social control function. Many behaviours that do not adhere to society's norms have become appropriate for management by health professionals. The "medicalisation of deviance" and health workers' role as agents of social control have received critical attention (14, 64, 162-166). The medical management of behavioral difficulties, such as hyperkinesis and aggression, often coincides with attempts to find specific biologic lesions associated with these behaviours (167-171). Historically, medicine's social control function has expanded in periods of intense social protest or rapid social change (172).

Medical Science is Both Esoteric and Excellent

According to this ideologic principle, medical science involves a body of advanced knowledge and standards of excellence in both research and practice. Because scientific knowledge is esoteric, a group of professionals tend to hold elite positions. Lacking this knowledge, ordinary people are dependent on professionals for interpretation of medical data. The health system therefore reproduces patterns of domination by "expert" decision-makers in the workplace, government, and many other areas of social life (173, 174). The ideology of excellence helps justify these patterns, although the quality of much medical research and practice is far from excellent, this contradiction recently has been characterised as "the excellence deception" in medicine (175). Ironically, a similar ideology of excellence has justified the emergence of new class hierarchies based on expertise in some countries, such as the Soviet Union, that have undergone socialist revolutions. Other conutries, such as the People's Republic of China, have tried to overcome these ideologic assumptions and develop a less esoteric "people's medicine" (176).

Studies of medical ideology have focused on public statements by leaders of the profession (in professional journals or the mass media), as well as state and corporate officials whose organisations regulate or sponsor medical activities (177). However, health professionals also express ideologic messages in their face to face interaction with patients (160, 163). The transmission of ideologic messages within doctor-patient interaction currently is the subject of empirical research (178-180)

Comparative International Health Systems

Marxist studies have focussed on three topics in this area: imperialism, the transition to socialism, and contradictions of capitalist reform.

Health Care and Imperialism

Imperialism may be defined as capital's expansion beyond national boundaries, as well as the social, political and economic effects of this expansion. Imperialism has achieved many advantages for economically dominant nations. Marxist critiques have dealt with imperialists of both advanced capitalist countries and socialist superpowers (especially the "social imperialism" of the USSR). (28, 181, 182). Health care has played an important role in several phases of imperialism.

One basic feature of imperialism is the extraction of raw materials and human capital, which move from third world nations to economically dominant countries. Navarro (183) has analysed how the "underdevelopment of health" in the third world follows inevitably from this depletion of natural and human resources, The extraction of wealth limits underdeveloped countries' ability to construct effective health systems. Many Third World countries face a net loss of health wokers who migrate to economically dominant nations after expensive training at home. Workers abroad who are employed by multinational corporations also face high risks of occupational disease (184).

By imperialism, corporations seek a cheap labor force. Workers' efficiency was one important goal of public health programs sponsored abroad, especially in Latin America and Asia, by philanthropies closely tied to expanding industries in the United States (27,27.). Moreover, population-control programs initiated by the United States and other dominant countries have sought a more reliable participation by women in the labor force (185, 186).

One thrust of imperialism is the creation of new markets for products manufactured in dominant nations and sold in the third world. This process, enhancing the accumulatian of capital by multinational corporations, is nowhere clearer than in the

pharmaceutical and medical equipment industries (88,89). The monopolistic character of these industries as well as the stultifying impact that imported technology has exerted on local research and development, has led to the advocacy of nationalised drug and equipment formularies in several countries (187,188)

Imperialism reinforces international class relations, and medicine contributes to this phenomenon (54, 189). As in the U. S., medical professionals in the third world most often come from higher income families. Even when they do not, they frequently view medicine as a route of upward mobility. As a result, medical professionals tend to ally themeselves with the capitalist class, the "national bourgeoisie", of third world countries. They also frequently support cooperative links between the local caplitalist class and business interests in economically dominant countries. The class position of health professionals has led them to resist social change that would threaten current class structure, either nationally or internationally. Similar patterns have emerged in some post-revolutionary socieities. In the USSR, professionals' new class position, based on expertise, has caused them to act as a relatively conservative group in periods of social change (28). Elitist tendencies in the post-revolutionary Cuban profession also have received criticism from Marxist analysts (190,191). Studies of several countries have analysed the relation among class, imperialism, and professional resistance to change (130,131,190-195).

Frequently imperialism has involved direct military conquest; recently health workers have assumed military or paramilitary roles in Indochina and Northern Africa (196-198). Health institutions also have taken part as bases for counter-insurgency and intelligence operations in Latin America and Asia (199).

Health Care and the Transition to Socialism

The number of nations undergoing socialist revolutions has increased dramatically in recent years, particularly in Asia and Africa but also in parts of Latin America, the Caribbean and Southern Europe. Socialism is no panacea. Numerous problems have arisen in all countries that have experienced socialist revolutions. The contradictions that have emerged in most post-revolutionary countries are deeply troubling to Marxists; these contradictions have been the subject of intensive analysis and debate.

On the other hand, socialism can produce major modifications in health-system organisation, nutrition, sanitation, housing and other services. These changes can lead, through a sometimes complex chain of events, to remarkable improvements in health. The morbidity and mortality trends that followed socialist revolutions in such countries as Cuba and China now are well known (190,191. 200-207). The transition to socialism in every case has resulted in reorganisation of the health system, emphasising better distribution of health care facilities and personnel. Local political groups in the commune, neighbourhood, or workplace have assumed responsibility for health education and preventive medicine programs. Class struggle continues throughout the transition to socialism. During Chile's brief period of socialist government, many professionals resisted democratisation of health institutions and supported the capitalist class that previously and subsequently ruled the country (130,131,192-195). Countries such as China and Cuba eliminated the major source of social class: the private ownership of the means of production. However, as mentioned previously, new class relations began to emerge that were based on differential expertise. Health professionals received larger salaries and maintained higher levels of prestige and authority. One focus of the Chinese Cultural Revolution was the struggle against the new class of experts that had gained power in the health system and elsewhere in society (56,202). Other countries, including Cuba, have not confronted these new class relations as explicitly (191).

Improved health care remains linked to the general level of economic development. In some African nations, for instance, severe poverty hampers organisational and programmatic changes. Countries like Tanzania and Mozambique have undertaken health planning that ties general economic development to innovations in health care (208-211).

Contradictions of Capitalist Reform

Although they retain the essential features of their capitalist economic systems, several nations in Europe and North America have instituted major reforms in their health systems. Some reforms have produced beneficial effects that policy makers view as possible models for the United States. Recent Marxist studies, although, acknowledging many improvements, have revealed troublesome contradictions that seem inherent in reforms attempted within capitalist systems. These studies' conclusions are not optimistic about the success of proposed reforms in the United States.

Great Britain's national health service has attracted great interest. Serious problems have

balanced many of the undeniable benefits that the British health service has achieved. Chief among these problems is the professional and corporate dominance that has persisted since the service's inception. Descision-making bodies contain large proportions of professionals, specialists, bankers and corporate executives, many of whom have direct or indirect links with pharmaceutical and medical equipment industries (75, 110).

The private-public contradiction, discussed earlier, has remained a source of conflict in several countries that have established national health services or universal insurance programs. Use of public facilities for private practice has generated criticism focusing on public subsidisation of the private sector. In Britain, for example, this concern (along with more general organisational problems that impeded comprehensive care) was a primary motivation for the recent reorganisation of the national health service (110). In Chile, the attempt to reduce the use of public facilities for private practice led to crippling opposition from the organised medical profession (130, 131, 194). The private-public contradiction will continue to create conflict and limit progress when countries institute national health services while preserving a strong private sector.

The limits of state intervention also have become clearer from the examples of Quebec and Sweden. Both have tried to establish far-reaching programs of health insurance, while preserving private practice and corporate dealings in pharmaceuticals and medical equipment. Recent studies have shown the inevitable constraints of such reforms. Maldistribution of facilities and personnel have persisted, and costs have remained high. The accomplishments of Quebec's and Sweden's reforms cannot pass beyond the state's responsibility for protecting private enterprise (136, 242). This observation leads to skepticism about health reforms in the United States that rely on private market mechanisms and that do not challenge the broader structure within which the health system is situated. (64, 213).

Historical Materialist Epidemiology

Historical materialist epidemiology is a rapidly growing field in Marxist studies of health care. Its antecedents derive from the classic research of Engels (1), Virchow (3, 4) and the nineteenth-century school of social medicine in Europe. Simply defined, historical materialist epidemiology relates patterns of death and disease to the political, economic, and social structures of society (214-216). The field emphasises changing historical patterns of disease and the specific material circumstances under which people live and work. These studies try to transcend the individual level of analysis to find how historical social forces, at least in part, determine health and disease.

Social Class and Economic Cycles

Considerable evidence indicates that the incidence and prevalence of mental illness closely follows periods of economic growth or recession. The relations are complex and differ by social class (217). Recent studies also have linked economic cycles, particularly those that involve expanding or contracting employment, to general mortality and morbidity trends among various social classes and age groups (218, 219).

Stress and Social Organisation

Previous interest in stress usually has focused on the individual life cycle or family unit Historical materialist epidemiology shifts the level of analysis to stressful forms of social organisation connected to capitalist production and industrialisation (220). Hypertension rates, for example, consistently have increased with the disruption of stable social communities and organization of work that is hierarchically controlled and time pressured. These observations apply to countries that have followed capitalist lines of development and socialist countries that have industrialised rapidly (221, 222). Similar investigations of coronary heart disease (223, 224), cancer (225), suicide (226) and anxiety (227) currently are in progress.

Work and Profit

Marxist studies in occupational health emphasise the contradictions between profitability and improved health conditions in capitalist industries (184,228). Specific research has clarified the illness-generating conditions of the work place and profit system with reference to disease entities such as asbestos and mesothelioma (83), complications of vinyl chloride (123). drug abuse (229, 230), and accidents (231). On the other hand, observation of occupational health practices in socialist countries have shown that rapid improvements are possible when private profit is removed as a disincentive to change (176, 232).

Studies in this area focus on the interplay among sex, class structure, and work processes. The varying experiences of women and men are related to their mortality rates and life expectancy (233, 234). Historically, women's use of health facilities and the attitudes of medical practitioners towards women's health problems have depended largely on women's

class positions (161). This conclusion is especially evident from the history of the birth control movement (235), psychiatric diagnosis (236), and gynecologic surgery (237). The unique health hazards and difficulties that women face as housewives (238) and paid workers (239, 240), currently are attracting greater attention.

One unifying theme in the field is modern medicine's limitations (15). Traditional epidemiology has searched for causes of morbidity and mortality that are amenable to medical intervention. Although it acknowledges the importance of traditional techniques, historical materialist epidemiology has found causes of disease and death that derive from broad social structures beyond the reach of health care alone.

Health Praxis

Marxist research conveys another basic message : that research is not enough. " Praxis," as proposed throughout the history of marxist scholarship, is the disciplined uniting of thought and practice, study and action (129). It is important to consider political strategy, especially as it concerns the health system of the United States.

Contradictions of Patching

Health workers concerned about progressive social change face difficult dilemmas in their day-to-day work. Clients' problems often have roots in the social system. Examples abound : drug addicts and alcoholics who prefer numbness to the pain of unemployment and inadequate housing; persons with occupational diseases that require treatment but will worsen upon return to illness-generating work conditions; people with stress-related cardiovascular disease; elderly or disabled people who need periodic medical certification to obtain welfare benefits that are barely adequate; prisoners who develop illness because of prison conditions (64, 241). Health workers usually feel obliged to respond to the expressed needs of these and many similar clients.

In doing so, however, health workers engage in "patching". On the individual level patching usually permits clients to keep functioning in a social system that is often the source of the problem. At the societal level, the cumulative effect of these interchanges is the patching of a social system whose patterns of oppression frequently cause disease and personal unhappines. The medical model that teaches health workers to serve individual patients deflects attention from this difficult and frightening dilemma (64).

The contradictions of patching have no simple resolution. Clearly health workers cannot deny services to clients, even when these services permit clients' continued participation in illness-generating social structures. On the other hand, it is important to draw this connection between social issues and personal troubles (242). Health praxis should link clinical activities to efforts aimed directly at basic socio-political change. Marxist analysis has clarified some fruitful directions of political strategy.

Reformist Versus Non-reformist Reform

When oppressive social conditions exist, reforms to improve them seem reasonable. However, the history of reform in capitalist countries has shown that reforms most often follow social protest, make incremental improvements that do not change overall patterns of oppression, and face cutbacks when protest recedes. Health praxis includes a careful study of reform proposals and the advocacy of reforms that will have progressive impact.

A distinction developed by Gorz (243) clarifies this problem. "Reformist reforms" provide small material improvements while leaving intact current political and economic structures. These reforms may reduce discontent for periods of time, while helping to preserve the system in its present forms : "A reformist reform is one which subordinates objectives to the criteria of rationality and practicability of a given system and policy... (It) rejects those objectives and demands — however deep the need for them — which are incompatible with the preservation of the system." "Nonreformist reforms" achieve true and lasting changes in the present system's structures of power and finance. Rather than obscuring sources of exploitation by small incremental improvements, nonreformist reforms expose and highlight structural inequities. Such reforms ultimately increase frustration and political tension in a society; they do not seek to reduce these sources of political energy. As Gorz (243) puts it: "... although we should not reject intermediary reforms... it is with strict proviso that they are to be regarded as a means and not an end, as dynamic phases in a progressive struggle, not as stopping places." From this viewpoint, health workers can try to discern which current health reform proposals are reformist and which are nonreformist. They also can take active advocacy roles, supporting the latter and opposing the former. Although the distinction is seldom easy, it has received detailed analysis with reference to specific proposals (64, 83, 107, 213, 244).

Reformist reforms would not change the overall structure of the health system in any basic way. For example, national health insurance chiefly would create changes in financing,rat her than in the organisation of health system. This reform may reduce the organisation of the health system. This reform may reduce the financial crises of some patients; it would help assure payment for health professionals and hospitals. On the other hand, national health insurance will do very little to control profit for medical industries or to correct problems of maldistributed health facilities and personnel. Its incremental approach and reliance on private market processes would protect the same economic and professional interests that currently dominate the health system (64,83,213).

Other examples of reformist reforms are health maintenance organisations, prepaid group practice, medical foundations, and professional standards review organisations (64,213). With rare exceptions that are organised as consumer cooperatives, these innovations preserve professional dominance in health care (245). There have been incentives to improve existing patterns of maldistributed services. Moreover, large private corporations have entered this field rapidly, sponsoring profit-making health maintenance organisations and marketing technologic aids for peer review (81).

Until recently, support for a national health service in the United States has been rare. For several years, however, marxist analysts have worked with members of Congress in drafting preliminary proposals for a national health service (152). These proposals, if enacted, would be progressive in several ways. They promise to place stringent limitations on private profit in the health sector. Most large health institutions gradually would come under state ownership. Centralised health planning would combine with policy input from local councils to foster responsiveness and limit professional dominance. Financing by progressive taxation is designed explicitly to benefit low-income patients. Periods of required practice in underserved areas would address the problem of maldistribution. The eventual development of a national drug and medical equipment formularly promises to curtail monopoly capital in the health sector.

Although these proposals face dim political prospects, support is growing. For instance, the Governing Council of the American Public Health Association has passed two resolutions supporting the concept of a national health service that would be community based and financed by progressive taxation (246, 247). This reform contains contradictions that probably would generate frustration and pressure for change. In particular, these proposals would permit the continuation of private practice and, therefore, the inequities of the private-public dichotomy. Yet, because a national health service provides a model for a more responsively organised system, advocacy of this reform seems a key part of health praxis (207).

Health Care and Political Struggle

Fundamental social change, however, comes not from legislation but from direct political action. Currently, coalitions of community residents and health workers are trying to gain control over the governing bodies of health institutions that affect them (111, 117-120). Unionisation activity and minority group organising in health institutions are exerting pressure to modify previous patterns of stratification (248-252).

Gaining control of the state through a revolutionary party remains a central strategic problem for activists struggling for the advent of socalism (124). Party building now is taking place throughout the United States. Advocates of "vanguard party" believe that historically all successful revolutions have resulted from the efforts of a small vanguard who hold consistent ideology and attract mass support during periods of political and economic upheaval. Activists adopting the vanguard approach frequently take jobs as lower-echelon health workers; they recruit members during unionisation efforts and oppose cutbacks in jobs and health services. Supporters of a "mass party" argue that mass organising must precede rather than follow the development of a coherent ideology; therefore, political energies should go toward building alliances that embrace a spectrum of anticapitalist views. Mass party organisers work toward community-worker control over local health programs, occupational health and safety, women's health issues, minority recruitment into medicine, and electoral campaigns for improved health services (254).

Recognising the impact of medical ideology has motivated attempts to demystify current ideologic patterns and develop alternatives. This "counter-hegemonic" work often involves opposition to the social control function of medicine in such areas as drug addiction, genetic screening, contraception and sterilisatian abuse, psychosurgery, and women's health care. A network of alternative health programs has emerged that tries to develop self-care and nonhierarchical, anticapitalist forms of practice; these ventures then would provide models of progressive health work when future political change permits their wider acceptance (255-259).

In anti-imperialist organising, several groups have assisted persecuted health workers and have spoken out against medical complicity in torture (130, 131, 260). Health and science workers also have used historical materialist epidemiology in occupational health projects and unionisation struggles.

A common criticism of the Marxist perspective is that it presents many problems with few solutions. Recent advances in this field, however, have clarified some useful directions of political strategy. This struggle will be a protracted one and will involve action on many fronts. The present holds little room for complaisance or misguided optimism. Our future health system, as well as the social order of which it will be a part, depends largely on the praxis we choose now.

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HEALTH CARE IN A REVOLUTIONARY FRAMEWORK : Possibilities for an Alternative Praxis

binayak sen and ilina sen

Any health care work is by its very nature, political. It is necessary for revolutionaries to get invovled in the non-reformist reforms to achieve the aim of social revolution. Starting from these premises the authors analyse health care in the revolutionary frame work from their own experiences of health care work in the militant workers' and peasants' movement in Rajhara. They have presented their views as a commentary on and a supplement to Howard Waitzkin's article in this issue.

The note that follows is a commentary on and a supplement to Howard Waitzkin's article on a marxist view of Heath Care. The main theme of this note is the relevance and significance of health care work within a left paradigm in India today.

To begin with however, a general point about politics and health needs to be made. It is common in left political circles to regard health care work as apolitical, or at best, as reformistic. We would argue that politics — the process of exercising power to enhance the material interests of a particular class or social group — permeates all aspects of the super-structure, including health care. The dominant ideology at different times has projected feudal or capitalist models of health care work. It is upto the left movement to expose their ideological foundations and concretely shape a future alternative.

Health Care and Health Status

The words "health care work" have been chosen deliberately, because the distinction between "health" and "health care" has not been fully realised even in debates among groups of politically conscious health professionals. It is generally appreciated in such groups that health care is only one among many determinants of the health of the community, (other important determinants being political economy, education, culture and so on). However, the other side of the coin that health care work and health care systems have a social, cultural, economic and political significance that goes beyond their impact on health status has not been given its due importance. Even when some attempts have been made to come to terms with this aspect of the matter, it has largely been on the basis of trivial notions such as "health as an entry point into the community." This is because the participants in these debates have hardly ever taken the political significance of their work as health professionals seriously. While many of them have sincerely and actively taken up political roles, this has almost always been in areas of work outside the field of health care itself. Both theory and practice have suffered in consequence.

"That health care work and health care system have a social cultural economic and political significance that goes beyond their impacts on health status, has not been given its due importance."

Some Lacunae in Current Approaches to a Theory of Health Care

The realisation that health care and health status are only distantly related has created a feeling of deep frustration among many of those health professionals who are seeking a means, within the health care system, to give expression to their own deep commitment to the people's welfare. Lacking a revolutionary scientific perspective about health care work that would give meaning to their professional practice, tney have taken up one of two types of roles. On the one hand some have retreated into the practice of health care essentially within the bourgeois "welfare" paradigm, seeking to give their work greater relevance by working among rural or urban poor (often at considerable personal cost). In many cases, they have also tried to give their work scientific and technical validity by incorporating positivist notions of a more rational epidemiology, with the intention of creating more efficient models of health care system for the future.

The other group, claiming for themselves a greater familiarity with the revolutionary theoretical apparatus, have nevertheless confined themselves

> *"The entire question of revolution as process of the elaboration of an alternative praxis based on prevailing material conditions and incorporating currently available elements of revolutionary theory has been by-passed."*

almost exclusively within a vulgarised version of the Leninist framework of Party and State policy. Their attention especially in India has largely been focussed on attempting critiques of existing health service systems. This has largely been from the standpoint only of political economy, the general thrust of the argument being something like 'Health problems cannot be solved within the bounds of the capitalist economy.' Some have attempted to devise alternatives, but these have again been based either on existing text book techniques such as epidemiology or on new techniques rooted in capitalist culture such as operations research — these alternatives wait for their realisation on a dens ex machina, characterised variously as "political will" (D. Banerji) or "dictatorship of the proletariat."

In both these cases, the entire question of revolution as **process** — of the elaboration of an alternative praxis, based on prevailing material conditions and incorporating currently available elements of revolutionary theory — has been by-passed. This is not to negate the importance of capturing State power, but to emphasise that the process of delegitimising the existing ideology in all walks of life has to begin here and now.

Waitzkin's Paper : Critical Comments

The importance of Waitzkin's article is that it serves as an overview — ableit a very brief one — of the area of interaction between the practice of health care and current concepts in Marxist revolutionary theory.

It remains to comment upon some of the points that he has raised in his article.

a) Reformist Versus Non-Reformist Reform

With the execption, perhaps, of academic and technical research, all the kinds of work available for the revolutionary practice of health care require participation in piecemeal reform programmes. The distinction between reformist and non-reformist (or revolutionary) reform, outlined by Gorz and quoted in Waitzkin's article, is therefore deserving of careful study and reflection. However, the **necessity** of such reforms to any revolutionary programme has not been given adequate importance in Waitzkin's article. He contents himself by saying in the opening sentence of this section, that "when oppressive social conditions exist reforms to improve them seem reasonable."

The necessity of social reform programmes was put forward much more strongly by Roza Luxemburg in her attack on Bernsteinian reformism, "Reform or Revolution", she starts at the very outset, "Can the social democracy (i. e. Communists) be against reforms ? Can we counterpose the social revolution, the transformation of the existing social order, our final goal, to social reforms ? Certainly not. The daily struggle for reforms, for the amelioration of the workers within the existing social order, and for democratic social institutions, offers to the social democracy the only means of engaging in the proletarian class war and working in the direction of the final goal — the conquest of political power and the suppression of wage labour. Between social reforms and revolution there exists for the social democracy an indissoluble tie. The struggle for reforms is its means; the social revolution, its aim."

The distinctions mentioned by Gorz apply mainly at the level of health policy rather than the practice of health care. Moreover, Waitzkin seems to sound as though there are or can possibly be, a set of independent criteria on the basis of which it is possible to decide whether a proposed reform is reformist or non-reformist. The fundamental question of the basic political framework within which the struggle for these reforms is to be carried out, is not emphasised.

How are the differences between reformist and non-reformist health care praxis to be established ?

For the last three years, in Rajhara, the Chhathisgarh Mukti Morcha has been running a health programme based on a militant organised workers' and pesants' movement. Some indications may

> *"Between social reforms and revolution there exists for the social democracy an indissoluble tie. The struggle for reforms is its means, the social revolution, its aim."*

perhaps be obtained from the experiences gained in the course of this work.

The first difference, is that reformism is directed primarily at suppressing emerging class antagonisms and contradictions between state power and peoples' power. Revolutionary reform, on the other hand, by the very fact that it is based on a militant recognition of class antagonisms and of the oppressive nature of state power, is directed towards precisely the opposite goal. Consequently, the most important goal of a revolutionary reform programme is not the achievement of the reform towards which it is putatively directed, but to further the political struggle of which it forms a part.

The second difference is that revolutionary reform does not derive its strength from any exogenous group of "reformers' standing outside the mainstream of the popular consciousness. Instead, its primary reasources are the political consciousness, organised strength and creative power of the working class and peasantry. Consequently, we cannot take a single step in such a programme without considering the direction in which the people want it to proceed. Any attempt to work out new ideas has to be preceded by an effort to explain these to the people, and to establish them in the popular consciousness.

"The Revolutionary reform does not derive its strength from any exogenous group of «reformers» standing outside the mainstream of the popular consciousness."

This also means that at any given moment, the direction of the programme cannot be governed by a "a priori" consideration of the appropriateness of the measures taken. The existing direction is always limited by the existing perception of the people, of the issues around which the programme is formed, based on their collective past experience. Nevertheless, it is necessary for those leading such programmes to have a deep and concrete historical understanding of similar programmes, and of the issues as they exist in the community. (In the case of health care, this would mean that we should possess a knowledge of epidemiology and a knowledge of the health service programmes.) This knowledge is necessary so that it may be posed in a constant dynamic tension to existing perceptions, so that the two may come close to each other in a series of successive approximations.

The third difference is that revolutionary reform is vitally conscious of the inevitability of its own failure. That is, we believe that the ills which owe their existence to an oppressive social order cannot, except marginally, be cured except by a radical restructuring of that order - that is - revolution Consequently, we do not hope nor expect that our praxis will succeed in effecting more than marginal improvements in the health of the people or even in the availability of curative care. However, our attempt is to direct the energies of the people into the establishment of an institution and a programme which reflects their aspirations. This presents to the people a radically new vision of an alternative social order, and a living critique of the existing one.

b) Medical Care and Ideology : Hegmony and Counter Hegemony.

Waitzkin refers in the first paragraph of the section on Medical Ideology to the thought of Gramsci. However, once again the reference is so brief that anyone not already familiar with the Gramscian idea of Hegemony would be unable to make much of the reference. It is worth going into the idea in slightly greater detail, since it forms one of the chief plants on which a revolutionary medical praxis is based.

Gramsci considered that the ruling classes exercised and perpetuated their control over the whole of society not only through the exercise of political force, but also through the power of the ideology elaborated by the ruling class intellectuals. Through this process of legitimisation the ruling class obtained the consent of the whole of society to exercise the power of Government on its behalf.

"In order to establish its own hegemony the working class must do more than struggle for its own narrow sectarian interests, it must be able to present itself as the guarantor of the interests of society as a whole. .". Gramsci had a broader view of the party than Lenin perhaps partly because he had greater experience of a developed bourgeois society. He conceived of it as deeply committed to an ideological and cultural struggle as well as to the seizure of state power. . . Thus he advocated a party that was an educational institution offering a counter-culture whose aim was to gain an ascendancy in most aspects of the superstructure (as opposed to directly political institutions) before the attempt was made on state power. The party organisers trained the workers in the assumption of control over their own

lives and thus anticipated a post-revolutionary situation. (David Melellan : Gramsci, in "Marxism after Marx").

Ideology in Health Care

Through its medical institutions — ranging all the way from state run hospitals through the Jasloks and the mission hospitals to the lovliest private practitioner, the ruling class is constantly engaged in the elaboration and perpetuation of an ideology that serves to oppress and control the workers and the poor.

There are three specific elements of ideology in health care which are not adequately dealt with by Waitzkin and hence need special consideration.

a) The Concept Of Charity :

The first, and in our view, the most important of these, is the concept of charity, or "daya". This is not considered in Waitzkin's article. Perhaps this is because he writes from a Western background, in which there already exists a clear distinction between the humanist and technical aspects of medical practice.

However, in India, we are all familiar with the idea that the medical practitioner, be he ever so crass, attains spiritual merit with each transaction in which he plays the role of healer. The objective caste status and the subjective Brahminical manner of most practitioners of modern medicine further reinforce this tendency. The influence of this tendency is yet again reinforced and consciously generalised by the religions symbolism that pervades the atmosphere and even the architecture in many of the important centres of modern clinical excellence. (Apart from admittedly religious hospitals—Christian, Hindu, Muslim or Jain — good examples are commercial-community based hospitals like Jaslok in Bombay and the Calcutta Hospital in Calcutta).

Of course, the function of the healer neither can nor should be totally divested of transcendent elements of spiritual and psychological authority. Neither can the role of the patient ever be totally divested of its elements of spiritual and psychological dependency.

However, where the healing institution has been built up on the initiative and with the resourcee of a militant organised working class movement, and functions specifically within a revolutionary framework, and with healers who live among the people and aspire to be identified as revolutionaries rather than as do-gooders, this relationship of authority and dependence can have a counter hegemonic influence and thus reinforce working class militancy and self confidence.

(b) Ideology and Technology :

The second area of ideology in health care that needs to be considered is that relating to medical technology. Waitzkin's article does go into this aspect briefly, in the section entitled "Medical Science is both esoteric and excellent." A much more penetrating and thorough going critique of the disabling and iatrogenic nature of modern medical technology is contained in the work of Illich- to which, surprisingly, this section makes no reference. Illich's work also contains the notion of a demystified, locally-controlled, human-scale technology. His notion of a society incorporating these ideas is free of class, free of history and independent of political process. He makes a fetish of Technology.

This is not the place to embark on a critique of Illich. However, irrespective of the viability of the solutions proposed by him, the notion of demystification of technology is important to any alternative praxis in the field of health care. This is because an important part of the ability of the existing health care system to reproduce ruling class ideology is due to its basis in an esoteric, monopolistic technology, seemingly divorced from its roots in ordinary mannual and human skills. It is this technological basis that creates within the field of medical practice a steadily widening gap between mental and manual work.

"An important part of the ability of the existing health care system to reproduce ruling class ideology is due to its basis in an esoteric, monopolistic technology, seemingly divorced from its roots in ordinary manual and human skills."

It is to reverse this trend that the concept of the voluntary health worker is important.

In the health programme at Rajhara, a training programme for voluntary health workers has been put into operation. However, these workers are not seen primarily as agents who, by performing simple

tasks in a decentralised fashion, increase the efficiency of the health programme. Rather, the VHWs are seen as ordinary workers, who, by undertaking to perform certain healing functions on the basis of their skills in and understanding of modern medical technology, render the entire range of medical technology accessable to ordinary human understanding. The training programme also repeatedly emphasises the idea that the primary duty of the VHWs is to spread their understanding of health care technology among their comrades.

C) Internal Organisation

A third ideological function that a health care programme can perform is to create, within the internal organisation of the programme, an image of what the social dynamics of such a programme in a socialist society might be. In particular, the undemocratic and hierarchical functioning of most health care institutions is something that any alternative praxis of health care must try to change.

Conclusion

In conclusion, the limits of this note — all too apparent to the authors must be emphasised strongly. In the first place, it is a comment on Waitzkin's article, and must be read against the background of the article i. e. not independently.

Secondly, throughout this note, in order to achieve the limited aims which the note seeks to fulfil, an attempt has been made to emphasise.

a) health care as against health status.

b) Superstructural elements as against more fundamental aspects related to political economy.

c) the revolutionary possibilities of an alternative praxis of health care as against the humanist values embodied (or at least imminent in) more traditional form of health care work.

It would be disastrous if on the basis of this note, anyone should conclude that we consider the second halves of these contrasts to be unimportant. On the contrary, in each case, it is only possible to emphasise the former where the latter is already taken for granted. This selective emphasis must be kept in mind throughout the reading of this note.

Finally, except where direct quotations have been made, no references are included. The points made in this note have emerged through discussions and practice engaged in with many groups of friends and colleagues over a long period of time.

Orwell's Hints to Writers

George Orwell in his 'Politics and the English language' attacks jargons severely and says: "Modern writing at its worst does not consist in picking out words for the sake of their meaning and inventing images in order to make the meaning clearer. It consists in gumming together long strips of words which have already been set in order by someone else, and making the results presentable by sheer humbug..... They will construct your sentences for you, even think your thoughts for you, to a certain extent and at need they will perfrom important service of partially concealing your meaning even from yourself." He has given some rules for writers to follow: (i) Never use a metaphor, simile or other figure of speech which you are used to seeing in print (ii) Never use a long word where a short one will do (iii) If it is possible to cut a word out, always cut it out (iv) Never use the passive when you can use the active. (v) Never use a foreign phase, a scientific word or a jargon word if you can think of an everyday English equivalent (vi) Break any of these rules sooner than say anything outright babarous..... The most important thing to remember is that good writing is not a collection of beautiful phrases or idioms. Good writing is the result of clear thinking.

(Excerpted from *The Hindu* May 8, 1984)

POLITICAL ECONOMY OF HEALTH CARE IN INDIA

An Outline

amar jesani and padma prakash

Medicine is not a socially independent activity. It is always articulated within a specific mode of production. Therefore, the dominant medical practice in India is bourgeois medicine and health care helps to strengthen and expand the capitalist mode of production. It also reproduces the capitalist relations of production at every level of its operation. The development of health care in India is examined in the context of the dynamics of socio-economic changes which have taken place since independence.

"My inquiry led me to the conclusion that neither legal relations nor political forms could be comprehended whether by themselves or on the basis of so-called general development of the human mind, but that on the contrary they originate in the material conditions of life, the totality of which Hegel, following the example of English and French thinkers of the eighteenth century, embraces within the term 'civil society', that the anatomy of this civil society, however has to be sought in political economy."

Karl Marx
Preface to
A Contribution to the Critique of Political Economy.

Every human being, in the last analysis, after removing all covers of social existence, is natural and therefore, biological. The flesh, blood and bones comprising the human body are too materialistic for anyone to deny their existence. But this natural living individual is not a lone, isolated entity. Through centuries of social development, the individual has evolved socially, coming into interaction with nature and while transforming it, has himself/herself been transformed. In the course of this social development, human beings have entered into various types of relationships in order to produce the necessary means of subsistence and to reproduce his/her own species and so given rise to the complex organisation of, to use Hegel's term, the 'civil society.'

The 'natural' or the biological forms the fundamental basis on which, historically, the social existence of human beings has developed. In the course of this development completely new forms of objectivity have arisen and although such objectivity have no analogy in nature, they still remain socially transformed natural objectivities.

To illustrate, in primitive societies, the exchange of necessary goods was not the rule but, more the exception. Here the natural use of those goods, to satisfy hunger or other needs was the predominant consideration. But with the evolution of a more complex social organisation leading to the evolution of a social system based on commodity production such goods which were necessary and useful for life also acquired, exchange value of their own. Every commodity in the capitalist economy has therefore, two characters, the use value and the exchange value. But this exchange value cannot be located or identified in the commodity. Exchange value is then, an exclusive social category which has no analogy in nature. "The main tendency of the developmental process that arises in this way is the constant increase both quantitative and qualitative of purely or predominantly social components, the 'retreat of the natural boundary' as Marx puts it. "(Lukacs, 1978).

Health and medicine are such social categories which have reference not simply to the biological existence of the human being, but to the social nature of such existence. That is why the understanding of health has changed according to the needs of different social systems and the needs of the ruling elite of that social system..

Features of the Marxist Approach to the Critique of Political Economy of Health

Four major features of the Marxist approach to the political economy of health may be identified—

The Social Production of Illness : Medical definitions of health and illness are located in the clinical pathology of the individual. In its narrowest and most limited form this definition locates the cause of disease entirely in the human body and disease is seen as a consequence of an unwanted attack of biological entities, bacteria, or virus, on the human body. The control of disease is seen to mean the control or eradication of these bacterial or causative agents. The concept that ill health is

directly related to the socio-economic formation and to the production relations in society has been put forward by several analysts since Engels wrote the *'The Conditions of the working class in England'*. Turshen traces the origins of what is termed the 'clinical paradigm' and discusses its weakness. According to her the discipline that comes closest to explaining the notion of collectivities is medical ecology. "Medical Ecology, thus asserts a relationship between environment, disease and man but selects only biological and socio-cultural factors as relevant." (Turshen 1977). This too ignores the illness generating forces in society. Doyal and Pennell in their book *Political Economy of Health* have elaborated on the evolution of the clinical paradigm in modern medicine. They discuss the direct and intimate relationship between the process of commodity production and destruction of health and between economic underdevelopment and health. (Doyal & Pennel, 1981). This view does not exclude or deny the operation of the biological mechanism which cause illness. The concept that ill health can only be understood as a consequence of the dynamics of class contradictions in society, and that the occurrence of disease is intimately related to the social formation within which the biological, physical and chemical operate is one of the major marxist contributions to the critique of political economy of health.

"Health and medicine are social categories which have reference not simply to the biological existence of the human being, but to the social nature of such existence."

Health as labour power: Under capitalism health is defined as an integral component of an individual's labour power or productive capacity. Labour power being a commodity under capitalism has a specific exchange value — the quantity of social labour necessary to reproduce it.... just as any other commodity does. In other words, the exchange value of labour power is the value of consumer goods and other services necessary to keep the worker and his/her children fit enough to work at a given intensity of effort. But to maintain this level of effort, or the maximum level of productivity, a certain level of physical and mental health is vitally necessary. Below that level of health the capacity to work falls off, and with it, the amount of surplus value that will be generated. The capitalist is simply not interested in the level of health beyond this, even though the worker will be vitally interested from the point of view of the quality of life and not of productive capacity (Schatzkin, 1978).

From this point of view of health as labour power, Schatzkin argues that medical care services are designed for maintaining the requisite level of health, a kind of labour power 'repair and maintenance service'. While educational services help to maintain the knowledge and skill component of work capacity, medical services help to maintain the physical and psychological components. Since the provision of health is part of maintaining labour power, it represents to the capitalist, a part of the wages he must pay out, directly as wages or indirectly as 'social' wages in the form of medical services.

The commodification of health care: A commodity is an external object which through its qualities satisfies human needs of whatever kind and is produced for exchange in the market. Health care is one such commodity. Historically, throughout most of human history, health care was an organic part of a communal society. It has often been indistinguishable from religious or social activities, none of which were exchanged (although gifts were often presented to traditional healers). As communal societies were conquered by feudal and eventually capitalist societies, health care was taken out of the hands of traditional healers and placed in the domain of doctors and midwives, who engaged in health care for a price i.e. as part of a money exchange. The physician was an independent producer selling the product of his or her own labour (Roder and Stevenson, p. 19-108).

But "capitalist production is not merely the production of commodities, it is by its very essence, the production of surplus labour" (Marx *Capital*, p. 644). The capitalist can organise the production of surplus value through the provision of health care and can realise high profits in this service industry. It is immaterial whether the surplus value is realised directly through the productive activities in the clinics and hospitals owned by the capitalist or indirectly, through the provision of health care by the state to maintain or increase the productive capacity of labour.

Medicine as a social relation: Vicente Navarro has concretised our understanding of how medicine should be viewed within the perspective of the social system. He argues that medicine or health

services is a social relation and reproduces the dominant relations of production. Medicine, therefore, has been different under different modes of production. He argues that since the mode of production is reproduced not only at the economic but also at the political and ideological levels, medicine contributes to the reproduction of the mode of production at the economic, political and the ideological levels and that medicine is always articulated within a specific mode of production.

These are the features of Marxist approach or methodology which we will use to examine the political economy of health care in India. But any attempt to examine the development of health care in India in the context of socio-economic development brings into focus the subject of the mode of production in Indian agriculture. We are aware that this subject has generated a lot of debate amongst Marxists in the last decade and there are divergent viewpoints. We will not here review the entire debate that has taken place nor put forward our viewpoint on the subject and substantiate it. Our focus is the political economy of health care. We will, therefore, endeavour to show that, the very efforts of the Indian State to penetrate the remotest corners of the agrarian set-up through the provision of health care facilities; is not any isolated and non-social phenomenon. But the efforts in fact strengthen and reproduce the already existing and expanding capitalist relations of production (whether in "pure" forms or intertwined with the pre-capitalist forms).

At the same time, we must admit that this analysis is our first attempt and the vastness of the exercise has made us very aware of the inadequacies in the sphere of information and data. The most evidently thin area of the outline is the lack of analysis and attention to the social roots of ill-health and disease in India. By and large, we have merely assumed that the patterns of illness are reflective of the class, caste and sexual contradictions and are influenced by the level of development, both quantitative and qualitative, of the social system. We have also assumed that changes in the patterns of illness are directly related to changes in socio-economic system, and have proceeded to focus on the changes in health care in light of the change in the mode of production. Our objective is to locate the crisis in health care and medicine within the larger political perspective for class struggle.

Health care under British imperialism

Western medicine came to India in the 17th century. The first medical men to set foot on the sub-continent were the surgeons sailing with the merchant ships of the maritime nations of the time. Throughout the century a number of Europeans found employment as surgeons and physicians in the Courts of the kings and nawabs. By the end of the 18th Century all the factories of the East Indian Company had at least one surgeon in their employ and the Indian Medical Service had been founded (Crawford, 1914).

At that point of time the medicine practised by the company doctor was hardly different from local systems. The doctor of the day had a limited range of therapeutics and curative procedures . . . . herbal medicines, a very few disease-specific chemical preparations, the new 'exotic' drug the Peruvian cortex (cinchona) for intermittent fevers, blood letting, venesection and other such procedures which had been in vogue since the time of Galen. The birth of modern scientific medicine was yet to be. In the following century however, there were enormous developments in the content, theory and practice of medicine in Europe. Not only had the knowledge base of medicine expanded but it was being structured to meet the needs of the dominant class. For instance, the two major disease casuality theories that were competing for acceptance, the contagion theory and an environment theory were more than **medical** theories and their incorporation into contemporary medical thought was dependent on how they affected the operations of the dominant class of the time. During the first half of the 19th century the contagion theory which suggested quarantine measurs as a means of controlling disease, was the best accepted. But with the increased movement of goods and of people towards the middle of the 19th

"Since the mode of production is reproduced not only at the economic but also at the political and ideological levels, medicine contributes to the reproduction of the mode of production at the economic political and ideological levels and that medicine is always articulated within a specific mode of production."

century, quarantine measures proved ruinous to the new entrepreneurs and merchants. One important reason for the acceptance of the miasma theory which located the cause of disease in unsanitary conditions was the potentially disastrous effects the acceptance of the contagion hypothesis would have caused (Tesh, 1982).

By the end of the 19th century, the sanitary reform movement in Britain had resulted in limited state intervention in the form of legislations and in the creation of institutions for administering them. But these refoms were actually self-limiting. Although they affected a section of the capitalists whose profits came from housing, water supply and sewerage dealerships, they served the needs of capital by decreasing the cost of disease. At the same time public health work and preventive medicine could never gain the status nor weild the same influence as clinical medicine. Public health work highlighted the shortcoming of capitalism and it would mainly benefit a class which was incapable of conferring status. (Turshen, 1977). On the other hand, clinical medicine with its focus on the individual rather than the social conditions underlying disease states offered a means of diverting public attention from the ills of capitalism.

"One of the aims of the planning was to aid the capital accumulation in the private sector."

The origins of the sanitary reforms in India are rooted in a different set of circumstances. After 1857, and the take over by the Crown, the number of troops on Indian soil increased and the health of the army became a subject of discussion. Moreover, cholera which had been confined to India so far broke out in a devastating epidemic in Europe. The British colonial government was pressurised into initiating sanitary measures in the Presidency areas. But these measures did not give rise to a public health system and the government chose instead, to encourage the setting up of medical research facilities for the assault on tropical diseases, an assault master minded in England. (Ramasubban, 1982).

Outside the government framework, a number of missionary groups and individuals had also begun to set up hospitals and medical institutions. For instance, a number of maternity hospitals and training centres were set up to teach midwives the 'modern' methods of childbirth. The funding for these came from wealthy Indians who wished to set up hospitals as memorials. (Billington, 1973).

Medical Colleges were set up to train assistants and a large number of Indians were taking avantage of the opportunity. The upper castes were specially encouraged to enter these colleges. Right from the beginning allopathic medicine in India acquired an upper caste elite base. (Banerji, 1974). Women too were given special concessions, so that the new maternity homes could be well-staffed.

The development of 'scientific' clinical medicine which embodied bourgeois ideology and relations of production was far more important than the creation of a public health system which might expose the true nature of British imperialism.

The health care network under the British comprised desultorily implemented sanitary measures and a fair number of hospitals and dispensaries with a growing number of medical research facilities undertaking work on tropical diseases under the tutelage of European doctors and researchers.

The path of development consciously adopted by the Indian ruling classes at the time of Independence.

The increasing popularity of modern allopathic medicine amongst the Indian elite strata was not an accidental phenomenon. It was rather a part of the process of emergence of Indian bourgeoisie as an economically powerful and politically shrewd class under British imperialism. As we will show later in this section, the choice of modern allopathic ("scientific") medicine as a basis of development of health-care system in India was deliberate (despite the fact that other choices and concrete proposals existed), and was in consonance with the path of socio-economic development adopted by the Indian ruling classes. To substantiate this statement, we will examine the situation at the time of independence under three headings : a) the strength of Indian bourgeoisie at the time of independence, b) the political and economic strategy adopted by the Indian bourgeoisie for strengthening its class rule, and c) the health care strategy adopted as a part of development perspective.

(a) The strength of the Indian bourgeoisie at the time of independence : On the eve of independence, although, India's total economy was overwhelmingly agricultural, substantial industrialisation had taken place. In fact, India was much

better placed than most other colonial or semi-colonial countries of that time.

India's domestic capital, at the time of independence nearly occupied an equal place with foreign capital in Indian economy.(Bettelheim, 1968). According to the same source, foreign capital's sphere of influence was particularly in the principal foregin currency earning industries (tea, jute and cotton) and in those which were the main sources of power in India (petroleum, coal, electricity).

In assessing the political strength of the Indian bourgeoisie at the time of independence, two points should be understood. Firstly, Indian capital had to develop under the tight control of British imperialism. In its confrontation with foreign capital and imperial policies, it was but natural that a tendency developed towards developing stronger economic and political organisations of its own. Moreover, Indian Capital did not develop through "free competition." Due to several intrinsic factors specific to India, and due to the fact that World Capital was already at the monopolistic stage, there was naturally a tendency for Indian industral capital to take monopolistic forms. This situation helped it to organise its various groups with much more ease and also made it more shrewd and alert in extending right political patronage.

Secondly, the Indian bourgeoisie was politically shrewd enough to understand the importance of Gandhi's ideology of harmony between capital and labour. During the 1918 textile workers' strike in Ahmedabad the newly formed Bombay Mill-owners' Association utilised this opportunity to establish contacts with Gandhi. Subsequently in 1921, with the launching of the Swadeshi movements they found in Gandhi a representative leader and in the Congress their representative Party. It is important to note that from this point onwards, the bourgeoisie never lost its political leadership of the nationalist movement. Thus, at the time of independence, the party of the Indian bourgeoisie, the Indian National Congress maintained its leadership of the nationalist movement and very meticulously implemented the strategy of the Indian bourgeoisie for the post independence growth of capitalism in India.

b) The political and economic strategy adopted by the Indian bourgeoisie for strengthening its class rule: The Indian independence was not a social revolution in which, one class through violent means seizes political and socio-economic power from another. In fact, independence was just transfer of political power from British imperialism into the hands of Indian bourgeoisie, keeping the socio-economic structure of the society more-or-less intact. Moreover, under the Mountbatten plan this transfer was affected through negotiation and bargain. Therefore, after taking over the reins of State power, the Indian bourgeoisie did not adopt radical measures attempting to do away with India's pre-capitalist forces. In so far as those forces did not seriously obstruct its plan of gradual transformation of Indian agriculture through state intervention it adopted a policy of compromise and accommodation.

At the same time, in the turbulent 1940s the Indian bourgeoisie feared the militancy of the working masses. It should be noted that from the later half of 1930s, the mass unrest had attained serious proportion. On the industrial front, the number of strikes in 1937 reached 379, the highest since 1921. Between 1942 and 45, the cost of living went up by 200 percent. The year 1940 saw another strike wave, in which workers of cotton textile, jute, oil, coal, iron, and steel and many other industries participated. The number of trade unions went up from

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"The Indian bourgeoisie opted for a model of health care service in which health care could be transformed into a commodity."

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188 in 1938 to 515 in 1944 with the membership rising from 3,65,450 to 5,09,084 (Dutt, 1983).

At the same time, the All India Kisan Sabha, which took a leading role in fighting against government repression and had helped organise self-help movements for food and funds, quadrupled its membership between 1942 and '45. (Dutt, 1983, p. 279). The end of the war saw two significant peasant movements - the Tebhaga movement between '46 and '47 in what is now Bangladesh and the Telangana struggle in '46 and '51 in Andhra. These were the most outstanding indicators of peasant ferment brewing all over the country.

The political ferment also spread to the armed forces in '46. The RIN mutiny and the support it gained in Bombay from the working class and middle classes shook the Indian bourgeoisie. Thus although, the Indian left, because of many reasons into which we cannot go in in this article, could not destabilise the bourgeoisie nor have a perspective

to take control of the national movement, the latter was forced to recognise the explosive potential for militancy among the labouring masses. The realisation that the mass pressure the bourgeoisie had so far used to their advantage could get out of hand, forced them into granting concessions in the overall plan of development at independence.

In the context of the above, the bourgeois strategy that developed after independence was twofold. Parliamentary democracy was accepted because it would widen the mass base of the regime, to give room to the contending socio-economic forces in the governmental block and to provide a safety valve for mass discontent. This method of bourgeois rule granted universal franchise, formal political democracy, equality before the law and so on all at one stroke. In the Constitution, it gave the State Power a clear bourgeois impress by making the right to private property a fundamental right. The right to work, the right to receive free health care, education and so on were not included in the list of fundamental rights but were relegated to being directive principles. Also, for the future socio-economic development of India, planning with the active intervention of the State in the economy was adopted as the best way for industrial development and for the transformation of backward agriculture.

"The expansion of capitalism is dependent on a politically stable and healthy labour force"

Briefly, the aims of planning with the active State intervention in the economy were the following: (i) To develop an infrastructure of the heavy industry, transport, communication, and energy, so vitally necessary to overcome the most glaring weaknesses of industry or the under-developed capital intensive industries. This development required huge investment and a long gestational period for invested capital, the private sector was not yet ready for this. (ii) To aid the process of capital accumulation in the private sector. This was to be done providing private capital with easy access to the infrastructure, by employing private contractors in the operation of public sector, by enriching individuals or groups of individual bureaucrats and so on, and (iii) To carry out limited agrarian reforms, to provide facilities for agricultural development and strengthen and expand existing bourgeoise forces leading ultimately to the modernisation of agriculture on a capitalistic basis.

c) The health care strategy adopted as a part of the development perspective : At the time of independence, three major reports concerning the health system in the new nation saw the light of the day. In 1939 the national planning committee had set up a subcommittee to prepare a plan for health. In 1940, the Chopra Committee was constituted at the first health minister's conference. And the Bhore committee began work in 1943, and was charged with the task of conducting a survey of the entire field of public health and medical relief on which to base plans for post-war development in the health field. (Bhore, 1946). It advocated a doctor-centered system of health care and urged the creation of a vast health infrastructure. Its main inspiration were the Flexner report (which consolidated the establishment of 'scientific' medicine in the US) and the Goodenough Committee (which had been a more recent report restructuring medical education in U.K.). Briefly, the Bhore committee recommended (i) the main focus of all health measures should be to enable people to enjoy life to the fullest extent and to help the individual reach his maximum level of productive capacity; (ii) the future health care system should be a doctor-based, hospital-centered system with a proliferation of health institutions; (iii) a salaried service should be preferred over private practice although "any apprehension that private practitioner will be seriously affected to their detriment by our proposals for a state health service is unfounded." (Bhore, 1949 p. 16); (iv) occupational and industrial health was an important aspect of health services; (v) maternal and child health was to be given a high priority; and (vi) consequent on the development of a health infrastructure, the pharmaceuticals and the surgical goods industries would have to be encouraged to expand.

The Chopra committee (the committee on Indigenous System of Medicine) report was published in 1948 and made recommendations which, had they been implemented at that time, would have resulted in a drastically different system of medicine. It saw an urgent necessity for evolving one unified system. It pointed out that the Bhore Committee had been rather silent on the question of indigenous systems in their grand plan for the development of health services in India. The Chopra Committee, in fact, had drawn up a plan for health services where the primary levels would mostly use indigenous system and the taluk hospital and beyond would practise 'synthesised' medicine. Almost all the recommendations were rejected. It

was decided that a full course in modern scientific medicine was to be the basis on which other systems were to be engrafted.

The Indian bourgeoisie opted for a model of health care service in which health care could be transformed into a commodity. Even in adopting the recommendations of the Bhore committee, it selectively incorporated those recommendations which contributed to the growth of the health infrastructure and the consolidation of bourgeoisie and its concomitant organisation. The development and consolidation of allopathic 'scientific' medicine was also a deliberate choice which offered several advantages which we will elaborate in a later section. For the moment, it is sufficient to state the supposed resolve of the Indian bourgeoisie to develop indigenous systems did not get translated into any meaningful programmes and India was well set on the way to enlarging the world base for the practice of 'scientific medicine'.

First fifteen years of Planning

(a) Growth of industries hastening captial accumulation : The public expenditure on development in the first three five years plan period was as shown in Appendix 1.

From the second plan, Industry and mining started receiving the attention of the planners and in the third plan it got the first priority. The major investment in this branch was in heavy industry. By 1965, substantial changes took place in the industrial structure. The gross value of output of light industry increased from Rs. 17,100 million in 1951 to 35,900 miliion in 1965, i. e. it more than doubled in 15 years. In this period, the output value increased by 8.5 times in the heavy industry. The share of heavy industry in the total output of manufacturing industries went up from 22 to 52 percent. The investment in heavy industry went up from 43.4 percent of the total investments in the manufacturing industries in 1951 to 79.8 percent in 1965. (Shirokov, 1980).

Thus, at the end of third plan period, the public sector had set up productive plants mainly in the sphere of heavy industry. It could do this by receiving soft-term loans from the Soviet and other 'Socialist' countries.

Even while developing the industrial infrastructure, in this period a slow but steady transformation of the Indian agrarian sector, was also begun.

(b) The Transformation of Indian agriculture The progress in the agricultural sector in the first fifteen years can at best be termed modest. The production of food grains recorded a much smaller growth than that of cash/industrial crops. The rise in grain production did not outstrip or even equal the rise in population. The sectoral allocations in the first plan gave first priority to agriculture, community development and irrigation which together accounted for 35.8 percent of the outlay. After that, the percentage share of the outlay in these areas consistently decreased.

Throughout this period agrarian legislation strengthened the position of the rural upper classes. The richer peasantry were able to gain greater freedom from their landlords and were able to increase their holdings. The big landlords were being transformed into capitalist farmers. The conditions of the poorer peasantary considerably worsened during these years. On the whole there was a slow development of rural capitalism. (Betteleheim, 1968).

Agrarian reforms were in this period directed not so much at transforming the modes of production in agriculture, as adapting the colonial agrarian structure to fit the pattern of growth envisaged by

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"The programmes like malaria control must be seen as death control programmes preceding the birth control programmes of a later period."

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the bourgeoisie. They were directed at eliminating the intermediaries and middle men and reducing the effect of feudal and semi-feudal relations. Agricultural policies and programmes favoured those landlords who had undertaken cultivation on their own, rather than rentier landlords (Joshi, 1969). The non-implementation or failure of those portions or land reforms or the 'failure of land reforms' was not surprising, considering as Davey remarks aptly, that the state assemblies were dominated by landlords and kulaks. Likewise, land ceiling legislation was easily circumvented. The Failure to ensure security of tenure has resulted in evictions. In the Punjab alone, the number of tenancies fell from 583,400 in 1955 to 80,520 in 1960 (Davy, 1975).

The Community Development Programme, launched with US aid in the first plan further strengthened the economically and politically dominant classes. Later evaluations showed that 70 percent of the benefits from agricultural extension went to

the elite groups, the more affluent and influential agriculturists'' (Dubey, 1969). The CD projects worked through existing village institutions which were more often than not, dominated by landowning groups. The 'Shramdan' drive which was supposed to encourage people's participation, in terms of free labour on road construction and repair, was usually contributed by the poor who had nothing to gain from roads; while those who benefitted from the roads, the large landholders who needed to transport goods out, got away by merely supervising. The CD programmes not only strengthened the rural elite but also created bureacratic institutions which acted as a link between the rural elite and the government.

After 1960, agrarian policies and programmes became openly favourable to rich peasants. The Ford Foundation sponsored Intensive Areas Development Programmes with its packages of credit, modern inputs, marketing facilities and technical advice was one such. This meant also the increasing use of high yielding varieties and fertilisers. Between 1960 and 1966 the consumption of fertilisers more than doubled (Davey, 1975). The two disastrous droughts in '65 and '67 upset bourgeois plans of strengthening and developing rural captitalism.

"Bourgeois radicalism either in the form of reports or legislations or programmes can best be viewed as concessions gained by working class militancy."

(c) Health Care in a Planned economy: The evaluation of health services and the growth of medicine in India can only be analysed in the background of the development strategies employed by the Indian bourgeoisie. As we have seen the primary aim of Indian capitalism at independence was the consolidation and expansion of capitalist relations and the transformation and integration of pre-capitalist mode of production. Accordingly, the health strategies that were chosen directly or indirectly supported and strengthened the drive for capital accumulation.

There were four factors, one may call them constraints, which limited the bourgeoisie's options in the health sector. Firstly, they functioned in an economy linked to and subservient to World capitalism. Secondly, they were committed to planned development. Thirdly, they had to function within the garb of a 'welfare State' and fourthly, in the beginning at least, they had to counterpoise and diffuse working class demands and tensions. What were the health plans and programmes of the period and how did they advance bourgeois aims and ideology?

In 1951, the population of India was 361 million. Nearly 38% of the working population were wage-earners (Bettelheim, 1968). The economic growth envisaged required a healthy and productive labour. However, the recent series of famines and droughts, increased exploitation of war, further deterioration of the abysmal public health and sanitary services, the post partition exodus had resulted in a labour which obviously could not contribute its best in terms of productivity. The situation also favoured political instability. The expansion of capitalism is dependent on a politically stable and healthy labour force and these called for measures to reduce mortality and morbidity in the Country. Moreover, the unhampered bourgeois hegemony of the national movement had been paid for by making promises to the working class and its leaders as well as the progressive educated elite. In response to the growing mass discontent the bourgeoisie had to make visible gestures which could demonstrate their concern and their intention of fulfilling promises. The creation of large health institutions, and building of medical colleges and research establishments was a most appropriate strategy.

At the same time it was recognised that the reinforcing of capitalist ideology and reproduction of bourgeois class relations was necessary to the growth and development of capitalism. 'Scientific' medicine which had evolved and matured under capitalism was obviously the most appropriate choice. In this sense, the adoption of modern medicine as the dominant system of medicine and the creation of hospital infrastructures where it could be practised was an ideological as well as political necessity.

1) Reduction in Morbidity and Mortality: At the time of independence 50 percent of all deaths were estimated to be from epidemic diseases. The expectation of life at birth was 32.45 years for males and 31.66 for females (Health Statistics, 1982). Cholera, Malaria, tuberculosis and smallpox were major killers. In 1950 malaria killed 75 million and

it was estimated that 156 million work days were lost causing a loss of Rs. 75 million. PAC Report-1983-84). Moreover, "aggregation of labour in irrigation, hydroelectric and industrial projects is attended with severe outbreaks of malaria". (First F. Y. Plan, 1952, p. 500-501). Tuberculsois was the other major killer which claimed fives lakhs lives annually and rendered 25 lakh people ill. It was estimated that 900 to 1000 million mandays were lost because of the disease. (First F. Y. plan 1952).

The Malaria control programme co-ordinated all Malaria control activities and consisted of DDT spraying, treatment with antimalarial drugs and providing malaria engineering services wherever there were developmental irrigation and hydroelectric projects.

The Tuberculosis Control Programme included vaccination with BCG, clinics and domiciliary services, and aftercare. The emphasis was on prevention with BCG. Both these programmes depended on international agencies like the UNICEF and WHO for supplies of necessary chemicals and vaccines.

Both these programmes, especially Malaria Control Programme, achieved spectacular results in the beginning, after which their success levelled off. By 1956 the mortality due to malaria had declined to 19.3 million and in the first year of the programme the number of workdays saved was estimated to be 116 million.

These programmes, especially the malaria programme conducted like a military campaign were conceived in such a manner that they were bound to fail. Cleaver (1976) points out that programmes like malaria control must be seen as death control programmes preceding the birth control programmes of a later period. Together they constitute "the means for obtaining control over populatian growth and thus over the supply of labour". These have been the strategies sought by business whenever they have sought to invest — in US, South, SW Asia or China.

These programmes have also been used to divert attention from the real causes of ill-health by equating disease eradication to 'technical' measures such as DDT spraying in the case of malaria or BCG vaccination in the case of TB. Both eradication and immunisation programmes constitute the 'medicalisation' of socially and economically determined problems of health. By introducing disease control and later eradication programmes, the Indian bourgeoisie was ensuring control over labour supply. Its early spectacular results also aided the legitimation of the 'welfare state'.

By the '60s increasing urbanisation with a 40 percent increase of urban population, inadequate housing and living conditions, low availability of food and impoverishment and unemployment had pushed up disease incidence rates. The health impact of new industrial processes that were being introduced went unrecorded. In industry, intensification of labour coupled with chronic malnutrition accounted for a rise in industrial injuries which rose by 30 percent between 1961 and 1966 while work force rose only by 16 percent (Ajit Roy, 1973)

2) Institution Building : Both the Bhore committee and the First Plan took serious and anxious note of the lack of medical facilities. Low health status was seen as being primarily because of lack of medical facilities. The major emphasis in the first fifteen years was an increase of hospitals, beds and dispensaries and the numbers of doctors, nurses and other health personnel. (Appendix 2).

"The faithful implementation of recommendations is contradictory to the interests of capital and can be brought about only by continued struggle."

The first plan envisaged an increase of 24 percent in the number of hospitals, a similar increase in the number of urban dispensaries, a 11 percent increase in the number of rural dispensaries and a 10 percent increase in hospital beds. The number of maternity and child health centres both in urban and rural areas was also to be increased. More than fifty percent of the budget for medical schemes was allocated to the establishment of hospitals and dispensaries.

Public health expenditure went into the provision of water supply and health sanitation, the major share going to Madras and Bombay. Since training of personnel of all kinds was so important, institutions and facilities for training were given high priority. The establishment of the All Indian Institute for standardising and co-ordinating post-graduate medical education was also initiated (First

F. Y. Plan). This venture, as well as others, such as the setting up of the Virus Research Centre in Pune, and the expansion of the All Indian Institute of Hygiene and Public Health was assisted by the Rockfeller Foundation. This trend for increasing the medical infrastructure continued throughout the fifties and the early sixties.

The Mudliar committee which published its report in 1961, recommended a strengthening of the district hospitals as against any expansion of primary health centres. In its opinion, the resources in regard to personnel, finance were not available sufficiently for any further expansion of PHCs.

It must be pointed out that most of the expansion in facilities took place in urban areas and a majority of the medical graduates set up practice in cities. Together with this, the pharmaceutical industry which had made small beginnings after the first world war had expanded a little during second world war. By the beginning of the '50s, India was self-sufficient in all the galenical preparations, most of the vaccines and alkaloids. But medicines like Pencillin, Streptomycin and sulphas were largely imported. After 1956, many foreign subsidiaries which had begun as trading operations went into the production of formulations, and public enterprises such as Hindustan Antibiotics and Hindustan Organic Chemicals were started in the late '50s mainly with the help of Soviet aid and technical know-how. But the major expansion of production was of the foreign subsidiaries. By '68-'69 the average profits for pharmaceuticals was 20.3 percent (Rangarao, 1977.)

"The rationale of the Indian bourgeoisie in adopting massive family planning drive was a means of controlling labour."

In short, the health care system being developed was a doctor oriented, hospital centered, curative system largely dependent on modern pharmaceutics with its locus in urban areas. For the Indian bourgeoisie, such a health system created a large base for consumer durables which were manufactured in the private sector. It also motivated the growth of the pharmaceutical and chemical industry. Increase in the number of hospitals and medical institutions also meant many more 'converts' to both 'scientific' medicine and the growing array of drugs and associated products. Also, these institutions were an emphatic and 'visible' assertion of the State's concern in fulfilling its 'Welfare' goals and in keeping with the 'leap frogging' approach to catch up with developed countries that was being advocated.

This is not to deny that the increase in the numbers of health personnel and institutions was not necessary or useful. That would be patently untrue. But arguments which place blame for the current crisis on the non-implementation of 'radical' recommendations of the Bhore committee are inadequate. Given the path of development chosen by the bourgeoisie, the alternative offered in, say the Bhore report or the Community Development Programme could never have been implemented. Bourgeois radicalism either in the form of reports or legislations or programmes can best be viewed as concessions gained by working class militancy. The faithful implementation of recommendations is contradictory to the interests of capital and can be brought about only by continued struggle.

3) Reproduction of bourgeois social relations and social control : The bourgeoisie always adopts policies and strategies which will reproduce and reinforce bourgeois social relations.

(i) The adoption of allopathic medicine as the dominant medical system : From the outset, it was clear that the western allopathic system was to be the medicine of choice. In the period between 1948 and 1960 four committees Chopra, Pandit, Dave and Udupa) were constituted to plan for the development of indigenous systems of medicine in the country. By and large the only recommendations which were implemented were those which helped to suppress or discourage the growth of indigenous systems. We have already noted what happened to the Chopra Committee report. Later reports increasingly emphasised the need to examine indigenous medicine 'scientifically'. Further, it was generally agreed that the only area where indigenous medicine could play a role in the health system was in area of drugs and remedies.

Why was the adoption of allopathic system as the dominant system of medicine so important to the bourgeoisie? Firstly, the class and sex biased, positivist individualist ideology of modern medicine reflected bourgeois ideology. The hospital system reproduces the social structures of bourgeois society and by doing so reinforces and authenticates it. Modern medicine with its dependence on mysterious sounding drugs and its array of task specific

functionaries and unfamiliar language facilitated the monopolisation of knowledge and skills. From this comes the power and influence to those who have access to this knowledge viz; the doctor and to a lesser extent other health professionals. These professionals, mainly doctors, who shared the same class background as the bourgeoisie were necessary for the legitimation, strengthening and maintenance of the capitalist order. In recognising and locating 'scientific' medicine as the dominant system, the bourgeoisie were also acknowledging and encouraging the role of the educated elite.

(ii) The development of maternal and child health services : Concern for the health of women, as mothers, has a long history in India. At the time of independence, the sex ratio (women to 1000 women) had already started declining. But none of the health plans nor policy statements were ever concerned with this. However, investment in the health of the child (and incidentally its mother) were seen as an investment "for building a sound and healthy nation" (First F. Y. Plan). These facilities were seen as facilities through which women could fulfil their socially determined primary role as mothers. In consequence, women's health needs became subordinate to the needs of the family. The deterioration of women's health and women's status through the '60s is to a large extent the result of the policies and programmes that have been adopted by the Indian bourgeoisie.

The provision of MCH service,however relevant, in the absence of primary care accessible to women indirectly perpetuates 'the myth of motherood' and the social location of women under capitalism mainly as 'reproducers of labour.'

(iii) Health Education. One of the most important component of 'preventive' services was and has been health education, which mainly reinforces the victim-blaming ideology of modern medicine. It also helps to mask the social roots of illness and disease. The emphasis on changing life styles rather than on changing the socio-political environment which endanger such lifestyles protects the existing power structures in society and the exploitative mechanisms of capitalism.

Changes in Health Policy after 1965

In the health sector the trends which were discernible in the first decade after independence continued to be prominent until about the '70s. In this section,[we will analyse the seemingly drastic change in health policy and programmes in the mid '70s in the context of socio-political and economic developments.

The two consecutive droughts in the mid-sixties had brought impoverishment and ruin to the rural landless and agricultural labourers. The proportion of rural population below poverty line reached a new hight of 57.9 percent (Shah). The nett per capita daily availability of food-grains was around 402 grams the lowest since 1952. It was in this situation that the Green revolution was launched. The concept itself, according to Davey was a part of America's post war strategies and was an extension of the agricultural research of the Rockfeller and Ford Foundations. The Green revolution also coincided with the glut in the world fertilizer market.

In the arease where the green revolution took root the crop yields shot up and also altered the agrarian structure. There was an increase in the numbers of agricultural labourers and despite mechanisation, the demand for labour also went up. In time the landless labour gained in strengh and emerged as a distinct class (Bhalla, 1983). Most of these also belonged to the deprived sections — the scheduled castes and scheduled tribes. At the same time the introduction of new technology and easier credit facilities had strengthened the small and marginal farmers and increased their staying power. Rich farmers were unable to buy them out. However there were no basic contradictions between the large and marginal/small farmers. These holdings constituted two-thirds of the cultivating households. In such a situation agrarian struggle was inevitable. Agitations for better wages were also, in reality struggles against caste oppression.

In areas outside the green revolution area, such as M.P., Rajasthan, Gujarat, parts of Bihar and

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"Reduction of state inputs in health care and a great involvement of the private sector were the outstanding features of the national health policy and is in keeping with the objectives of the new bourgeois strategy for health care."

Orissa and West Bengal, it was the small and middle farmers who gained most by the introduction of new technology. They soon began to challenge the economic and political power of the landlords, most of whom were absentee landlords. The interests of these new rich small and marginal farmers were contradictory to both that of the landless as well as that of the politically influential landlord. Having gained economically this section of the peasantry, the middle farmers who were usually from the middle castes, began to develop political clout both on the regional and the national scene. They also began to demand development inputs which would enable them to gain a qualitatively better standard of living... electrification, consumer goods and health services.

By the beginning of the '70s, industrial production had stagnated, the rise in national income being only 4 percent in 1971-72. The population went on rising, hence the labour force had continued to expand. The total work force was 184 million, 8 percent or 15 million were unemployed. While wages had remained stagnant the average product per worker had increased. So, the employing class had benefitted, thus polarising income (Davey- 1975).

The Fourth Plan's emphasis was on rural and agrarian programmes and the enormous emphasis on family planning. This was an attempt to postpone and forestall the crisis and also a recognition of the new and growing political influence of the middle peasantry. In the health sector almost half of the allocation went to family planning.

There have been a number of analyses of why there was an emphasis on family planning. The most obvious explanation is of course, the enormous spurt in numbers in the previous decade, which was mainly because of decrease in death rates. Even-though epidemic diseases had not been eliminated there was a decrease in the number of death in each of these epidemics. Another less obvious reason was that given the high rates of unemployment and impoverishment, the sheer numbers presented a threat to the stability of the system. That there was imperialist pressure, through the use of conditional international loans and such, cannot of course be denied. But the rationale of the Indian bourgeoisie in adopting a massive family planning drive was a means of controlling labour supply to suit the expansion of more capital intensive modern industries.

Throughout the first half of the '70s there was a marked increase in the number of industrial conflicts, strikes, peasant agitations, tribal movements, student and mass movements most of which were directly or indirectly concerned with economic grievances. The Gujrat and the JP movement were against price rise initially but later made political demands. The Naxalite movement and the revolt of the tribals in Srikakulam, were more broad based and directly challenged class oppression. That brutal repressive measure were used to break and suppress them was an indication of the insecurity of the Indian bourgeoisie. The world economic situation had also changed by the mid '70s. Many advanced capitalist countries were on the brink of a third technological revolution. The national bourgeoisie realised that if they were to forge a new relationship with the world capitalist economy they had to re-structure the industrial sector by reducing state intervention and increasing opportunities for foreign investment. This also meant disciplining and controlling labour and stabilising the political climate.

Inputs into rural development therefore served two purposes — firstly, they facilitated the further penetration of capital and secondly, 'visible' efforts such as provision of health care, educational facilities, electricity, low capital intensive 'appropriate' technologies would not only nullify the growing discontent and political influence of the new rich 'middle' peasants and capitalist farmers but also strengthen them as a class who would associate with the industrial bourgeoisie in opposing and suppressing working class struggles. Moreover, these efforts would also mean an expanded market for the new technological consumer products.

The Fifth Plans' Minimum Needs Programme is just one such strategy. In the health sectors it was being realised that a hospital based health system supported by vertical programmes such as Malaria Eradication and Family Planning no longer performed either this ideological role or achieved their socio-politcal objectives. There had not been any large scale improvements in health indicators in the past years. Their role as advertisements for the bourgeoisie's concern for 'welfare' had long outlived its usefulness. Moreover, it was no longer a good economic option. The amount spent for welfare of the working class comes out of the surplus value being created. If this no longer achieves the purpose of either maintaining and reproducing labour or of strengthening class relations by reproducing and legitimating the capitalist order, the loss in surplus value cannot be justified. The only answer was a change in strategy. 'Scientific' medicine gave way to a 'community'

conscious science-based medicine which was accommodating enough to allow the operation of other systems under its hegemony.

Through the '70s a number of voluntary agencies funded by industrial houses, Christian missions or foreign development agencies, and individual professionals frustrated and disgruntled with the existing system began to 'experiment' with alternative health strategies following essentially the 'health-by-the people' approach. The rising cost of health care, of medicines and equipment provided a further impetus to many. Naturally enough this approach had an instant appeal to a mass of socially-conscious urban and rural youth, plagued by the threat of unemployment and sensitive to the increasing deprivation of the masses. Many of these projects achieved initial success in improving health indicators such as infant mortality or maternal deaths, epidemic deaths and achieving high immunisation rates.

In 1975, the Srivastava Committee was the first official document which put forward a proposal for health care which created a new health functionary.. the community health worker. Based on the premises that most of the commonest health problems are of the easily preventable kind and may be easily looked after at the village level, the committee proposed the training of selected villagers as the first contact in the new rural health care structure. It suggested a well organised and graded structure of dispensaries, hospitals and referal services.

The alacrity and the speed with which these proposals were accepted and implemented by the government is a measure of how appropriate and urgent they were to those in power. By then, in 1977 the Janata Party, a configuration albeit temporary, of the commercial bourgeoisie and capitalist farmers had dislodged the Congress, which then represented mostly the industrial bourgeoisie. The Janata Party saw the provision of rural health care as a means of fulfilling election promises. Moreover, they were the representatives of just those sections who would be benefitted most... the rural rich and middle peasantry. Democratic selection processes notwithstanding, the community health workers were certainly not to come from among the poor.

Around this time several countries, met under UN auspices at Alma Ata and signed the Declaration which proposed just such a strategy. The international move conferred on the programme a high status which would play a part in persuading reluctant and antagonistic professional bodies to co-operate.

In 1980, the new strategy for rural health was formalised and integrated into overall bourgeois strategy in the form of a national health plan, proposed by the ICMR-ICSSR committee. This report, a good indicator of the bourgeois radicalism, in the '80s, proposed a pyramid model of health care, based on a diffused primary health care programme relying on limited, cheap, labour-intensive techniques and technology and a smaller, capital-intensive, mainly curative, referral and specialist service using sophisticated, modern, high tech resources, and the hospital system. Both the terminology and the spirit of the report was greatly influenced by Illich. It saw the organising of primary health care on a community basis as an essentially 'political experience' which would enable people to fight other battles and this in turn would set in motion a 'process to strengthen a decentralised, democratic and participatory social order'. (HFA, 1981). The major recommendations of the HFA were incorporated into the Sixth Plan.

In 1982, the government of India published a Statement on National Health Policy. It enunciated an integrated, comprehensive approach toward the future development of medical education, research and health services. Broadly it followed and repeated the recommendations of the HFA. But in doing it re-emphasised certain trends which had been barely discernible in the HFA and the Sixth Plan. For instance, it focussed greater attention on reducing governmental expenditure and utilising untapped resources to encourage the establishment by private practice professionals . . . . and financial and technical support to voluntary agencies (NHP 1982-). More importantly, it focussed on the need to establish a referral system which could provide speciality and super speciality services. Again, to reduce governmental expenditure private investment in such fields was to be encouraged. In providing water supply and sanitation too, appropriate technologies were to be used 'to reduce expenditures'. The 'involvement of community' in the implementation was also seen as a means of reducing costs. Thus, reduction state of inputs in health care and a great involvement of the private sector are the outstanding features of the national health policy and are in keeping with objectives of the new bourgeois strategy for health care.

We will examine briefly how the alternative strategy fits into the overall strategies adopted by the bourgeoisie since last quarter of 1970.

(1) The growing mass of rural poor has little access to any kind of health care. Diseases which could be easily prevented were still claiming lives. Maternal and infant mortality rates were still pretty high. Community health workers, however inefficient orinappropriately selected would ameliorate sickness conditions to some extent. The credit for this in turn, would accrue to the party in power.

(2) More importantly the new alternative is demystifying medicine just sufficiently for people to learn to use and to become dependent on modern drugs. If until now injections had a 'magic' value, soon metronidazole or B-Complex which the CHVs use will become familiar enough for people to ask for and demand them. This expands the base of operation for pharmaceutical companies.

(3) As we have noted earlier, the medicine practised by the community health worker was no different from the medicine practised by a hospital-located health functionary. Its content was the same but its garb was different. Therefore, the dominant/dominated relations that it embodied are strengthened and reproduced. Since the outreach of these rural health alternatives is so much larger, bourgeois ideology is being strengthened. It is possible that these programmes are hastening the degeneration of indigenous practices and local healers.

As the main disseminators of health education messages, the village health workers are also spreading the ideology of 'victim blaming' shifting attention from socio-political roots of illness and masking class contradictions. In locating the main focus of health care in the family, programmes determine and lend support to the oppressive institutions which are so necessary to the maintenance of capitalist order.

Moreover, the village health workers have generally been from among the rich and middle peasants and middle castes. The acquisition of new techniques and knowledge has led to a different level of monopolisation strengthening the power base of this class. The existing selection process does not cut across existing power relations in society, including that of man and woman, and so reinforces them.

(4) This separation of primary and referrel facilitated the modernisation and development of productive forces of modern medicine on the one hand, while at the same time appearing to cater to the needs of the masses. The new strategy attempted to resolve the growing contradictions between the relations of production and production forces in modern medicine. The introduction of CAT scans, linear accelerators, laproscopy and so on in the last few years must be viewed in this context. The new 'medical leasing' companies which have started to function will facilitate the introduction of new technology and instruments in health institutions.

Conclusion

Medicine is not a socially independent activity. The evolution of medicine and the development of health care can only be understood within the larger perspective of the overall development of the Indian economy and the changes in the relation of production that came about.

The choice of 'scientific' medicine and a hospital-centred structure through which it can be practised was a deliberate choice on the part of the Indian bourgeoisie and was a necessary component in achieving the objective of a capitalistic transformation of India. This also had a profound impact on the traditional practices in India not simply in terms of making their techniques less effective, but more so by changing the social relationship that such practices of those techinques embodied. Such transformation has further strengthened the domination of bourgeois medicine.

The community health approach so lauded since the late '70s initially gave an illusion that radical changes were being brought about in health care. We have argued here that this approach was never intended to bring about any radical changes but on the contrary, it was very much a part of a strategy to expand the hosptial-centred health care structure at the primary and secondary level in the rural areas. Not only. The strategy also involves inviting private investment and collaboration in the health care system with state gradually reducing its inputs in health. The community health approach also helps the pharmaceutical and surgical goods industry (which is largely in the domain of the private sector) to expand their domestic market.

Lastly India with her vast area and dense population divided into class, caste, sex, cultural, ethnic and a host of other differences is probably the most complex of socio-economic formations rendering attempts to properly comprehend it a most difficult task for the social scientists. There is always the danger of making sweeping generalisations and over-simplifications in providing an analytical outline of the development of health care in the context of the dynamics of socio-economic changes in India. We have not taken into consideration in

this analysis the regional differences and the unevenness of socio-economic development. But we have identified the dominant trend of development at the general level and analysed how the development of health care services is integrated with it. We are also aware that we have not included in our analysis the relative strength and political influence of medical organisations like the Medical Council of India nor their relationship with the pharmaceutical and surgical goods industry.

Given the vastness of the subject it was only natural that all aspects could not be covered. But the article, we hope, will generate enough interest in this subject so that the analysis can be deepened and broadened.

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Appendix 1

	First Plan*		Second Plan		Third Plan	
	Rs. in thousand million.	in per cent.	Rs. in thousand million	in per cent	Rs. in thousand million	in per cent
Agriculture and community Development	2.9	14.4	5.7	11.8	10.68	14
Irrigation and Major projects	4.3	21.4	5.3	11.1	6.5	9
Electricity	1.5	7.4	3.8	7.9	10.12	13
Industry and Mining.	—	—	8.9	18.6	17.84	24
Other Industries	1.0	5.0	—	—	—	—
Transport and Communication.	5.3	26.4	13.8	28.9	14.86	20
Social and other services.	5.1	25.4	10.5	21.7	13.0	17
Stocks	—	—	—	—	2.0	3
Total	20.1	100	48.0	100	75.00	100

*Actual result.

Compiled from, Bettelheim, 1968, p. 157, 161 and 163)

(Appendix 2 contd. on page 48)

A CULTURAL CRITIQUE OF MODERN MEDICINE

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The Cultural Crisis of Modern Medicine, John Ehrenreich (Edited), Monthly Review Press, New York and London, 1978, 300 pages, $7.50

It is quite often alleged that marxism is interested only in the economic aspects of society or a part of it. But this view is at best a misunderstanding. Marxism does attach primary importance to the analysis of the process of social production ("economic aspect") of any society but it is also quite concerned with a concrete analysis of the superstructural aspects. In the field of analysis of Health (determinants and dynamics of health status of the people) and Medicine (as science and technology and as system of professionals geared to intervention based on this science and technology) marxists have given due primary importance to the political economy of health. But the ideological/cultural aspects of health and medicine have also been analysed by Marxists. *The Cultural Crisis of Modern Medicine* is one of the most important contributions in this field. What follows is more of an introduction to this book than a critical review.

The book is a collection of a dozen essays abridged, and edited by John Ehrenreich. In his lengthy introduction, John Ehrenreich first traces the historical and political origins of the "cultural critique" of modern medicine. Ehrenreich alleges that the political, economic critique concentrates its fire on the inequitable distribution of health-services, on the problems of organisation of medical-care, and is not much concerned with the nature of medicine itself. Ehrenreich is not entirely correct in his assertion. There are marxist analysts who analyse the political economy of health not primarily from the standpoint of distribution of medical services. For example, *The Political Economy of Health* by Lesly Doyal and Imogeh Pennel is primarily concerned with showing the relationship between phases in the bourgeois economic development in Britain with the development of Medicine and it shows the ideological/political role of medicine at different historical junctures in England. It is however true that traditional marxist analysts have almost exclusively focussed on the lack of proper medical facilities to the poor and on medicine as a money making industry.

Ehrenreich points out that the question of the purpose and nature of medicine was brought forward by the women's movement, and movements of minorities who pointed out that in their experience, medicine was not so much a helpful measure as a tool of ideological, and cultural domination. Along with the radical community movements, the other sources of cultural critique were some critical health analysts (Dubos, Mckeown, Powls, Illich) who showed that modern medicine has not at all been as effective and beneficial as it is made out to be. Most of the infectious diseases in Europe were well on the way out before the era of antibiotics. When antibiotics came, the West had by then acquired the so-called diseases of industrialisation, cardio-vascular diseases, accidents, cancer, psychological and geriatric problems, and so on for which medicine has not much to offer in real terms.

Ehrenreich in his introduction also points out the problems of a cultural critique. For example when one says that the existing system of Medicine is not very effective, or helpful, this gives a ground for conservatives and reactionaries to argue for a reduction in the subsidised, social medical-care-programmes. In backward, developing societies, even a rise in the availability of conventional medicine can help to improve the health status of the population. In such countries a cultural critique is not a priority, though it is still relevant in such situations. In such situations what is needed is more medical care and also a better one, a helpful one and not as a tool of domination. He points out other problems such as dependency, professionalism, problems of technology. Capitalism has given a particular shape to these problems. We should reject their capitalist form but the problems in Ehrenreich's view do not end there and hence concrete socialist alternatives need to be worked out.

Medicine and Social Control : The Book is divided into three parts. The first Section consists of three essays which deal with how modern bourgeois medicine acts as one of the mechanisms of **Social Control**, of perpetuating and consolidating bourgeois social norms and ideology. *Medicine and social control* by Barbara and John Ehrenreich makes a critique of Talcot Parson's (the famous bourgeois sociologist) concept of 'sick-role' which governs the understanding of the relations between the sick-person and

the society in bourgeois society. The medical profession decides as to who is sick and how a sick person should behave. A particular person may be pronounced as below normal, or neurotic even if he/she is just different from or rebelling against what the doctor and the bourgeois ideology regards as normal. A worker may be ill, but the doctor may declare him to be normal and fit for work so that the employer does not have to give any concessions to the worker during his illness. Like law or religion, these medical verdicts cannot be challenged. This power of the medical profession is one of the mechanisms through which people are made to behave in the way in which bourgeois society wants them to behave. The authors show that the medical social control could be either disciplinary or cooptive. Disciplinary control mainly directed against the poor, discourages people from saying that they are sick by making sickness an unpleasant, painful episode--- long waits at the doctor's clinic, unpleasant reception by the medical profession, costly, painful treatment and so on. Cooptive control, on the other hand coopts the recipient of medical care (mostly well-to-do, rich people) into the dominant mainstream of social-cultural life by creating, and reinforcing a certain stereotyped understanding of what constitutes proper social behaviour. There has been a tremendous increase in the jurisdiction of the medical profession (from brith to marriage to old age), in the availability of medical services, and through these two, in the dependency of the people on the medical profession. The authors show how the situation of interaction between the highly trained, higher-middle-class doctor and a patient from a poorer or a minority community or a woman is a fertile situation for conveying ideological messages and cultural values; and how this is done in the U. S. today. This framework is a good starting point for us here in India to explore our own situation here.

Irving Kenneth Zola in *Medicine as an Institution of Social Control* continues with the same theme and further unravels the ramifications of this mechanism. Her analysis however, focuses exclusively on the domination of the medical profession without linking it with the capitalist character of today's medicine and today's society. It reads more like a radical attack on modern medicine as such, and not on its capitalist character. Nowhere does Zola make a distinction between the capitalist limitations of modern medicine and the potentialities created by it which can be used in a socialist society.

Marc Renaud in *Structural constraints to state intervention in Health* first shows how the medical profession, even after the advent of modern medicine, has played a very small role in the improvement in the health of the people. He quotes important authorities to back-up his statements. He then shows how, by their very nature, the incidence and effects of the so-called diseases of industrialisation (for example, cardio-vascular diseases) are not amenable to curative services. So long as the profit-seeking giant corporations continue to decide what we eat, what work we do and how we live and travel, which consumer goods we shall use, ill health is going to continue. The state allows this basic mechanism of production of illness on a social scale unaffected. It also allows the commodification of medical-care. All it does is rationalise the access to medical care and make it less costly. But the drug-industry and the health-industry in general, would continue to live happily. The manufacturers of ill health would then continue to accumulate profits as before. The bourgeois state is not prepared to stop the production of surplus-value even if it threatens the health status of the people; it cannot stop the commodity character of medical care. This is the limit of state intervention in bourgeois society. Renauds analysis is a good concrete case study of the limitations of state intervention in bourgeois society and a solid indictment of the limitations of medical care in this society.

Women, Illness and Medicine : The second section of the book consists of five concrete case-studies which demonstrate how medicine in bourgeois society acts as one of the mechanisms of social control over women. In *Sick women of the upper classes* Barbara Ehrenreich and Deirde English show how medicine in 19th century Britain reinforced stereotyped images of women that they are inherntly prone to illness, and that they ought to be frail, and engaged only in "feminine pursuits" like decoration, courtship, motherhood. If a woman were to engage herself in social, intellectual activity, she would be regarded as being abnormal and inviting illness. By "women" the medical profession meant only upper-class women since it had a vested interest in the cult of female invalidism among its upper-class clients. Medicine gave a " scientific basis" to the male-chauvinistic ideas by proposing "scientific" theories which had no real scientific basis. Scientific knowledge of how sexual, and reproductive organs function did not exist then. This opened a wide door for the male prejudices amongst medical men to be propagated as scientific opinions. medical treatment was more of a punishment. It is quite a shock to read about the barbaric methods of treatment empolyed by doctors

to treat women including the application of leeches, blister-producing counter-irritants to genitalia, removal of the ovaries (for "conditions" like troublesome menses, eating like a ploughman, erotic tendencies, dysmenorrhoea...!) and others. The account of hysteria by the author is also extremely revealing. This short essay is one of the most damning indictment of medicine in the 19th century.

It is quite a surprise to learn that doctors were opposed to the birth-control movement as late as the 1920s. Linda Gordon in her piece on *The politics of birth-control* documents this opposition and the reasons for it. She also shows the connection between the left, the feminist and the birth-control movement, and how later, due to the problems created by World War I, the birth-control movement lost the leftist political edge. Later, the medical profession instead of oppossing birth control, decided to co-opt and monopolise it. With their entry and with the decline of the role of the left, the birth-control movement no more remained a people's movement. Along with the feminist birth-control movement, there was the tendency in the U.S. of new eugenics. The essential argument of this eugenics was that unfit people such as criminals, and paupers, were genetically inferior. They were therefore, interested in the compulsory birth-control for these "enemies of civilisation." Because of the lack of strong anti-racist traditions in the U.S., even the feminist used the eugenics arguments for the propagation of the birth-control movement. This, together with the lack of interest of the leadership in "reformist. peripheral" issues like birth-control, resulted in the decline of the paople's birth-control movement and made it into one dominated by conservatives, reactionaries, racists and the ilk. In the 1930's however, eugenics fell into disrepute because Hitler's Nazi Germany took it over. This zigzag movement of the status of birth control makes very interesting reading.

The next three articles show how the ideology of sexist or of scienticist, commercial professionalism affects clinical practice even today. Doris Haire in her *Culturul warping of child birth* makes a point by point critique of the various technical measures employed by American obstetricians for conducting deliveries from confining the normal woman to bed, to shaving the birth area, to Routine Electronic Foetal Monitoring. She argues that all these interventions are not really indicated and that they are not beneficial to patients but to doctors and to commercial interests. It is because of these unnecessary and potentially hazardous medical interventions that the U. S. is outranked by 14 other nations in the low rate of infant mortality although the U. S. is the most prosperous and advanced nation in the world. The U. S. leads all other developed countries in the rate of infant deaths due to birth injury and respiratory distress such as postnatal asphyxia and atelectasis. The reason ? - monopolisation by doctors of midwifery (unlike in Europe) and their overintervention-list strategy. One cannot disagree with Doris Haire. One may add that even in countries like Britain with a long history of legal, expert, trained midwifery, doctors more or less decide the strategy of intervention and the midwives have to follow it. The midwives are fighting this out and are putting forward a series of arguments, facts, figures, and alternative practices. This disease of monopolisation and overintervention is no longer unique to the U. S.

The other two essays in this section focus on the sexist biases in the medical textbooks. Mary Howell exposes the paediatricians whereas Dianna Scully and Pauline Bart pin down the gynaecologists for their sexist bias and their ignorance about female sexuality. Like other articles in this book, these are also made up of quite concrete stuff.

The third section of this book deals with **Medicine and imperialism**. Frantz Fanon in his *Medicine and Colonialism* depicts the hatred, distrust, and alienation felt by the Algerian people towards their colonial masters and their doctors. Most of the doctors owned land or some business and were directly a part of the exploiting system, even of political oppression and torture. This explains the ill-feeling of the Algerian people about these doctors. As opposed to this, the Algerian people were extremely cooperative, helpful to the health programmes and to the doctors of the National Army of Liberation. It is difficult to fully appreciate the situation in a colonial country for those of us from the younger generation who have never experienced it. But Fanon has made his point clearly.

E. Richard Brown in his *Public Health in Imperialism* shows how the Western interest in tropical diseases and public health in tropical countries was motivated by their imperialist interests. The American imperialists wanted an overall penetration into South America for higher profits. But the productivity of these people was low. The reason for their "laziness" was found to be diseases like hook-wom. Hence the Rockfeller Foundation's first act after its inception in 1913 was to create an International Health Commission to extend worldwide the hook-worm and public health programmes initiated in the U.S. The programme against hookworn in Costa Rica

succeeded and resulted in a 50 percent rise in labour productivity. The Rockfeller Foundation had quite clearly expressed why it put a priority on the hookworm programme. "On account of the direct physical and economic benefits resulting from the eradication of the disease and also on account of the usefulness of this work as a means of creating and promoting influences." This latter element was as important as the first one. Brown convincingly shows how. Brown clearly welcomes the betterment of the health status of the population but shows that the chief aim of these programmes was to prepare better conditions for the accumulation of imperialist capital, and people's health was subservient to this aim. He shows that Health was defined as the capacity to work and other aspects of health were neglected.

James Paul in his short essay *Medicine and Imperialism* puts forth an overall picture of the relationship between the two. He considers five "principal features of medical imperial politics— (1) physicians as covert diplomats; (2) physicians as propagandists and spies among colonial people; (3) medicine as a vehicle for imperialist propaganda in the metropolitan centre; (4) colonies as territories for medical sales and medical experimentation; (5) Medicine as a vehicle for establishing and maintaining the exploitative social relations." His analysis is, however, exclusively based on the colonial experience and it has to be seen as to whether and how many of these five features continue in post-colonial imperialism and whether any new features are added. (For example : the question of brain-drain) The distinctly new phase of imperialism after the World War II must be borne in mind. Many marxists mistake colonial imperialism in general and hence generalise from the colonial experience. James Paul's analysis tilts towards such misinterpretation. He however points out that the contradictions of "imperialist medicine" and hence the possibilities of revolutionary change. It would be worthwhile to study the relationship between imperialism and medicine in India, keeping in mind the five features discussed by James Paul.

The last article in this section traces the relationship between the military and medicine. It shows how medicine has on many occasions not been above nations, and how it has directly, and indirectly helped war-efforts. This much is not surprising. What is more startling is the conscious effort of invaders to use medical work to boost up the image of the conquering nation. Howard Levy has successfully shown with the help of quotations from military men how this occured in the case of the American Army in the fifties and the sixties, especially in the Vietnam War.

On the whole, the book is rich and wide-ranging in the historical material it contains which exposes the ideological role played by medicine in bourgeois society. It does not, however, show the correspondence between the different stages of the development of capitalist economy and the development of health and medicine. This is partly because of its character as a collection of essays. But that in itself cannot explain this weakness. Secondly, the contradictions in medicine in bourgeois society are no where posited clearly, emphatically. The analysis therefore can be misunderstood as an attack on medicine as such and not on its bourgeois form. Morever the possibility and necessity of revolutionary change does not emerge because of this failure to point out the contradictions in today's medicine. Though not a very systematic account in this sense, this collection of incisive and very absorbing pieces of historical analyses is one of the most important and useful additions to the marxist analysis of medicine in bourgeois society. It is essential reading for anybody wanting to understand the nature of medicine in capitalist society.

(Contd. from page 44)

Appendix 2

DEVELOPMENT OF HEALTH INFRASTRUCTURE IN INDIA

Year	Doctors	Hospitals	Beds ('000)	Dispensaries	PHCs	Sub Centres	Pharmaceutical Production Rs. in Crores	
							Formulations	Bulk
1951	59, 338 (1950)	2694	117	6515	725 (1951-56)	—	10	—
1965	99,779	3900	295	9486	4793 (1967)	17,521 (1967)	150	18
1975	1,97,650	4023	404	11295	5293	33,616	560	130
1981	2,68,712	6805	477	28312	59511	51,192	1,430	289

Source : *Health Statistics of India*, 1971-75 and 1982 Central Bureau of Health Intelligence, Government of India, 1971-75 and 1982.
Health for All : An alternative Strategy, Indian Institute of Education, Pune. 1980.
OPP Bulletin, July-August, 1983.

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A Worker's Speech to a Doctor

We know what makes us ill
When we are ill we are told
That it's you who will heal us.

For ten years, we are told
You learned healing in fine schools
Built at the people's expense
And to get your knowledge
Spent a fortune.
So you must be able to heal.

Are you able to heal ?

When we come to you
Our rags are torn off us
And you listen all over our naked body.
One glance at our rags would
Tell you more. It is the same cause that wears
Our bodies and our clothes.

The pain in our shoulder comes
You say, from the damp; and this is also the reason
So tell us :

Where does the damp come from ?

Too much work and too little food
Make us feeble and thin
Your prescription says :
Put on more weight
You might as well tell a bullrush
Not to get wet
How much time can you give us ?
We see : one carpet in your flat costs
The fees you earn from
Five thousand consultations.

You'll no doubt say
You are innocent. The damp patch
On the walls of our flats
Tells the same story.

— Bertolt Brecht

OMEN & HE

SOCIALIST HEALTH REVIEW

IS MEDICINE INHERENTLY SEXIST ?

AMNIOCENTESIS : MISUSE OF MEDICAL TECHNOLOGY

WOMEN AND THE RURAL ENERGY SITUATION

HEALTH OF WOMEN IN THE 'HEALTH' INDUSTRY

OF WITCHES AND WITCH HUNTING

socialist health review

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ROOTS OF WOMEN'S ILL HEALTH

Power relations mediate all social life and as such, they not only determine our environment, but also define the way we react to it. Our definitions of health and illness depend on the characteristics of the society we live in and our location in it. In a society where commodity production is predominant as long as an individual can work productively or rather, as long as that labour is productive to the capitalist, the individual is considered healthy. Therefore, health services are directed at maintaining this minimum level of health below which the generation of surplus value would fall off (Schatzkin, 1978). In turn, this defines for the worker, the boundaries of ill health such that real health needs from the point of view of quality of life never get expressed. For, the fulfilment of these health needs would be contradictory to the needs of capital accumulation. The patterns of morbidity and mortality express and reflect this contradiction between real health needs of the worker and the level of health necessary for the generation of surplus value.

How does all this affect women? As a component of the labour foce, their needs are subordinated to the needs of capital. Further, a woman's traditional role is to reproduce and sustain labour power. This is the necessary function of women in society--- the maintenance and reproduction of the labour force, which in turn is necessary for the reproduction of capital. For a woman, the definition of health is determined by her ability to perform these functions. Just as in the workplace, the worker's health needs are subordinated to the needs of capital accumulation, women's health needs are subordinated to the need to maintain the work force at that level of health required for the generation of surplus value. Moreover, women as integral units of the family, are necessary not only for the reproduction of the working class, but also for reinforcing the ideological underpinnings of capitalism. Medical and health services are designed to keep women at an optimum level for the performance of these functions. **Thus, the needs of capitalist accumulation mediating through partiarchal relations suppress women's real health needs and their reproductive freedom.**

Medicine legitimates and rationalises social attitudes and notions about women (and men) whether they relate to their physiology or their social role. And since women's oppression is justified by their supposed biological inferiority, medicine obviously plays a very important role, in substantiating this myth. Medicine's 'model' of the normal human being is the upper/middle class male. This makes all women, by definition 'abnormal'! Menstruation becomes a disability, child birth an illness. Female physiology is considered a complication of the basic male physiology especially with reference to the reproductive (Rothman, 1979).

Two of the characteristic features of bourgeois medicine are its clinical paradigm and the dominant mechanistic model of the human body. This locates the cause of all ill-health entirely within the body, either as being due to the intervention of an outside agent or because of the malfunctioning of one or more 'parts' which comprise the human body. This means that women's complaints, if they are not caused by obvious external agents, must lie either in their 'aberrant' reproductive physiology (so different from the male) or in their peculiar female 'psyche'. Moreover, the models of 'normality' in medicine are those that are approved of by dominant ideology and are useful to bourgeois society. For women such a model is the ideal image of wife or mother. Not surprisingly, all health problems of women are seen in terms of how they might affect the fulfilment of that role.

Medicine, which is always articulated within a specific mode of production, contributes to the reproduction of that mode not only at the ideological but also at the economic and political levels. Thus the inappropriateness of medicine for women or its inaccessibility to the poor or to women is a characteristic feature of bourgeois medicine which serves to maintain and perpetuate the current relations of production and reproduction.

Any enquiry, discussion or analysis of health from a radical, marxist perspective must include an analysis of the women - and - health nexus. At the same time, no understanding of the women's status, their oppression and exploitation can be complete without a clear perception of the political and ideological roots of women's ill health.

The Women's Health Movement Abroad

In the '60s, the growing disenchantment of women with institutions and with social norms took the form of women's liberation movement. The

brought women together in consciousness raising groups where women for the first time began to exchange personal experiences and make women-to-women contacts that had been denied them. Among other things, this led to the realisation that their demeaning and dehumanising experience in the health system were not stray and personal incidents but the universal experience of all women. This has over the years generated several analyses of the medical system and has led to specific actions and programmes.

Elizabeth Fee (1970) characterises these in terms of three forms of social criticism, the liberal feminist, radical feminist and marxist feminist. Liberal feminist saw their main challenge as being destroying the myth of a biological basis of women's oppression. They demanded equal pay and equal opportunity for women but did not seriously challenge the social and economic hierarchy. They saw the medical system as reflecting the sexual hierarchy of society with a male monopoly of the upper levels and a predominance of women at the menial jobs at the lower levels. Their solution was centered on demanding a better representation of women at the upper levels, but did not question the hierarchical organisation of health care or of society.

Radical feminism demanded a fundamental, restructuring of society, its institutions and values. Many of these women had participated in student, civil rights and anti-war movements. Some had become disenchanted with left parties and official marxist view of feminism as being a form of bourgeois protest and with marxist analyses which appeared to be insufficient to explain women's situation adequately or provide a satisfactory theoretical understanding of the family, reproduction, sexuality. Radical feminism saw the patriarchal family as the major and most important oppressive force in society and a battle of the sexes as being of more consequence than the class struggle. They saw revolution as leading to an annihilation of sex differences. There was an outpouring of radical feminist analyses of society, of institutions and of politics in the late '60s and the '70s, all of which served to expose the operation of paternalist ideology and the structures of women's oppression in society.

Radical feminists saw the medical profession as imitating patriarchal society and were heavily critical of medical mysticism especially in the area of gynaecology and obstetrics. They worked to disseminate information and knowledge about medicine and specially about women's sexual and reproductive functions which had for so long been a monopoly of the doctors. This led to a strong movement against hospitalised childbirth in the US. Groups in many states of the US and in Britain and Europe set up women's health centres and self-help clinics as 'alternatives' to the dehumanised hospital centred medical systems. They provided for gynaecological examinations, and childbirth facilities as well as abortion services. Inevitably they have come into conflict with power groups and professional groups, but have survived and proliferated nevertheless.

It was mainly this current of feminist thought which gave rise to a number of significant books and pamphlets such as *Our Bodies Ourselves* (from the Boston Women's Health Book Collective), *Witches-Midwives and Nurses* and *Complaints and Disorders* (both by Barbara Ehrenreich and Deirdre English) and *Vaginal Politics* (by E Frankfort). This and other similar literature has been very influential in rejuvenating the interest of radical and marxist groups in the history, nature and ideology of science and medicine.

Marxist feminists saw their task as the combining of feminist consciousness with historical dialectical method of analysis. They saw patriarchy as both supporting and strengthening capitalism. At the same time they saw capitalism as providing the material condition for the future abolition of sexual distinction between man's work and women's work, but the realisation of these conditions being limited to the extent necessary for the survival of capitalism. "Capitalism... cannot free itself from dependence on sexism any more than it can transcend class oppression or the pursuit of private profit at the expense of the satisfaction of real human needs" (Fee, 1975).

Marxist feminists believe that no one characteristic of the medical system can be analysed in itself, but must only be seen in relation to the entire social structure and its institutions, and the economic order in which it is rooted. Thus, they see the fragmentation of capitalist medicine as a part and consequence of the ideology of medicine which sees the body in parts. They are also critical of the sexist bias of medicine and the emphasis on 'scientific' base which itself has an inherent class and sex bias. They see medicine as ignoring the social roots of illness.

Women's Health Issues in India

In India, women's health issues have not emerged as a major focus of activity or analyses within the women's movement. Women's groups are of course, aware of women's inaccessibility to health care services, the lack of reproductive freedom, sexual harassment of women patients (and of nurses) and to a lesser extent the operation of the sexist ideology

in medicine. But this has not led to a comprehensive theoretical understanding of women's health as a part of feminist theory. Nor has it generated concerted action programmes. There have been individual campaigns, such as the demand for a ban on estrogen-progesterone drugs for pregnancy testing and amniocentesis for sex determination. But while these, especially the latter, has given rise to significant debate and action, one cannot say that they have led to a better perspective of the role of medical technology in the oppression of women. The reason for this apparent uninterest in health issues perhaps lies in the historical and economic roots of the women's movement in India and needs to be examined.

This apathy towards health issues is even more significant when one recollects that rape was one of the earliest issues taken up by the women's movement. It would have been logical to suppose that this would have led to a discussion of broader questions of female sexuality, a realisation of how little women knew about their bodies and ultimately, to a questioning of the male monopoly of the information about women's bodies, its functioning in health and illness. This did not happen, although there was sporadic discussion about such matters as the 'technical' definition of rape and the relevance of injuries on a woman's body. Nor was there significant and sustained effort to provide 'alternative' medical aid to vicitims. Why did this not happen ? Was it because the medical system and the definitions promoted by it hold sway even among those who have little access to it ?

Health issues which would be of concern to Indian women are generally different from those which confronted feminists in the West in the late '60s and early'70s. For instance, by then in most countries of the West, the major achievements of medicine which produced visible and noticeable change had already taken place. The life expectancy had levelled out and there appeared to be after all, a maximum limit to human life. Together with this, the hospital-centred medical system had increasingly become dehumanised, authoritarian and expensive. The women's movement could successfully question the ethos of such a system and its value to women.

In the '70s in India, although the state health system was weak and inefficient, it was at least able to bring some relief, especially in acute illness and during crises. Moreover, by this time several groups, frustrated and disgusted with both the state systems and the rapacity of the private practitioners had set up 'alternative' health programmes in the rural areas. And many of these had made maternal and child health programmes their main focus. Undoubtedly, this brought about positive changes in women's (or rather maternal) health status. Therefore the women's movement in India had no immediate and concrete targets in the area of health The demand for birth control measures and abortion were two major areas of activity of the women's health movement in the West. In India, such measures were, in fact, being forced on women as part of a determined and massive family planning programme.

Further, the sex-wise mortality and morbidity picture in the West was and is quite different from the Indian. In the US, for instance, women show lower mortality and morbidity rates and also a greater frequency of contact with the medical system. Women there were concerned with countering the criticism that women were generally, hypochondriac, and in voicing concern and initiating action about the increasing consumption of tranquilisers and painkillers by women.

What then, are the issues which demand concerte action, research and discussion in India today? It is hardly necessary to point out that women's health status has been steadily declining. In 1901, the sex ratio (number of women to 1000 men) was 972 which declined to 930 in 1971. In almost every age group (except 10 to 14 years) until 34, the age-specific death rates are higher for women. Or in other words more than half the deaths among women occur before they are 35. According to one report, 20 per cent of all deaths among women in the age group 15-34 are because of childbirth and associated causes (SNDT 1981). However, maternal mortality is not the major cause of death among women in that age group. And yet most health programmes are directed only at reducing maternal mortality without any alteration of the accessibility of this group of women to general services.

Women have also been the major focus of family planning programmes. Most of the measures proposed and implemented — sterilisation, abortion, oral contraceptives, copper T, injectables — have affected women's health significantly, and even disastrously.

The changing patterns of economic development have put a heavy burden on women which is reflected in their health status. In a society where women hold a lower social status, any situation of deprivation is bound to affect women adversely. The marginalisation of farmers, landlessness and forced migration, temporary and permanent, have undoubtedly affected women's health and nutritional

status. The growth of the small and the cottage industries sector has depended heavily on female labour. And most of these do not come under the purview of any kind of safety legislation. Therefore, women have, in the last decade become exposed to new kind of health hazards. Added to this is the fact that women risk their lives in the performance of domestic labour. According to Rajni Kothari a woman spends approximately 73,000 hours on an average in the kitchen, most of which are environmentally harmful and unsafe (Raj and Patel, 1982).

The number of 'workers' among women is estimated to be only 20.01 per cent. But the Census definition of 'work' does not include cooking, collecting firewood, fetching water, etc. activities which take up half the energy expenditure of women. At the same time adult women eat consistently less than men and also much less than the recommended calorific allowances, which are themselves based on somewhat questionable assumptions. According to a recent survey carried out by the National Institute of Nutrition, Hyderabad, 60 per cent of the rural population is anaemic, most of this group being women. Malnutrition is not only aggravated by diseases but renders women more prone to illness. Ironically enough, although women suffer from illness more or at least as often as men, they seek help less often.

There is little hard-core data available to support any analysis of women's health status. And this itself is a telling comment on how unimportant women's health is. Nevertheless, there is sufficient evidence — experiences, personal observations—that women's health status presents an apalling, dismaying and deteriorating picture. In this, the second issue of SHR, we examine a few facets of this picture.

Sathyamala discusses the sexist ideology of medicine and its operation in the past and currently. She convincingly shows that the sexist ideology is so closely integrated with the theory and practice of medicine that it is difficult even to identify it, let alone accept it.

Our next offering is an article by Barbara Katz Rothman, reproduced from the book *Women : A feminist perspective* edited by Jo Freeman (1979) giving a slightly different theoretical explanation of the sexist bias. She sees sexism in medicine as a component of the mechanistic, positivist bourgeois medicine and calls for a critical examination of the medical mode of women's bodies and health.

Nirmala Sathe provides an overview of health issues in the women's movement in India.

Srilatha Batliwala writes on the energy-health-nutrition nexus with reference to women. This paper gives credence to the fact that the gap between expenditure for energy and intake of calories is large for women than for men. These data and the accompanying analyses gave for the first time, (when it was first presented) hard core information and statistics about some aspects of women s health status.

Meredeth Turshen's article is an extract from a book *Third World Medicine and Social Change* (editied by John Morgan and published by Lanham) which is just out. It analyses the nutrition-health complex with reference to women in Africa. It looks at the health situation of women from the perspective of Africa's changing economy. It seeks to show the linkages between political and economic measures, changes in cropping patterns, food imports, international loans and changes in land tenure, women's nutritional and health status.

Misuse of medical technology is at times, a sore topic of discussion. The use of amniocentesis for sex determination, aroused great deal of discussion a year ago. It was in fact, one of the few issues that women's groups took up all over the country and pressed for a ban on such tests being used indiscriminately. Vibhuti Patel concisely traces the major features of this debate and highlights the misuse of such medical technology which more often than not leads to female foeticide.

How healthy are workers in the drug industry? A large number of women are employed in the pharmaceutical industry , but there are few studies of their health status. Sujata Gotoskar, Rohini Banaji and Vijay Kanhere report a case-study of women workers manufacturing vasodilators. A drug such as this is prescribed to produce a definite physiological change in those who need it. What happens to normal women who have to breath in the powder day-in and day-out? This study, highlights the need to gather more information of the hazards women face at work places.

We wind up this issue with a review and report of 'health' problem which is currently facing the Kashtakari Sanghatana working among the adivasis in Dahanu in Maharashtra. And this is the torture of women 'bhutalis' (witches). The Sanghatana has attempted in this paper to locate the issue in a socio-economic perspective. Who is the witch? Why

(*Contd on Page 57*)

IS MEDICINE INHERENTLY SEXIST ?

c sathyamala

During the last twenty years, many feminists, activists and researchers have been taking a closer look at medicine. There is voluminous and irrefutable evidence that the medicine of the 19th and early 20th centuries incorporated and reinforced the sexist ideology in society. But does sexism operate in and through current medical practice in India? The author argues, that the teaching and practice of medicine here is strongly influenced by what happens in the West With extensive illustrations from popular textbooks and journals she shows how sexism in medicine operates just as strongly now as it did a hundred years ago. Additionally, campaigns such as the one promoting breast feeding continue to use outmoded and demeaning stereotype for women. This article is based on a paper written for the Medico Friend Circle's Annual Conference held in 1983, which focussed on 'Prejudice against women in the medical system.'

Medicine has played and continues to play a powerful role as a reinforcer and perpetuator of sexist ideology. It has the dubious distinction of shifting justification for sexism from religion to bio-medicine, thereby taking it out of the realm of prejudice and putting it within the confines of 'scientific' objectivity. The interpretations medicine offers are basically to legitimise the discrimination of women and their continued oppression under the guise of biological determinism.

The period of rapid industrialisation in the West witnessed the growth of the monopoly of the white middle-class male over medicine. This period also saw the emergence of new social norms which specified roles on the basis of sex and class. The upper-class women were expected to lead a sedentary life of enforced leisure with nothing more taxing than embroidery to keep them occupied, whereas the working-class women were forced to lead a life of hard physical labour. Although it was the working class women who were subjected to a host of illnesses, (a result of nutritional deficiencies and poor working and living conditions) it was the upper-class women whom medicine considered as inherently sick. "It was the wealth extracted in that harsh outside world that enabled a man to afford a totally leisured wife. She was the social ornament that proved a man's success, her idleness, her delicacy, her child-like ignorance of 'reality' gave a man the 'class' that money alone could not provide". (Ehrenreich and English, 1973).

The combined effects of enforced leisure, confinement and boredom led to the emergence of the cult of 'female invalidism' among the upper class women. To the medical men the 'sick' women of the upper classes were a godsend. Here was a patient, who was ill without being 'diseased', in obvious need of the ministrations of a medical man (like himself), compliant enough to obey every one of the doctor's demands, and wealthy enough to afford the prolonged treatment --- an ideal patient as it were. "As a businessman, the doctor had a direct interest in a social role for women that encouraged them to be sick; as a doctor he had an obligation to find the causes of female complaints. The result was that as a scientist he ended up proposing medical theories that were actually justifications of women's social roles". (Ehrenreich and English, 1973). The popular medical theory proposed was that women's inherent weakness rested on the physiological law of 'conservation of energy'. Each person had a fixed supply of vital energy and the different organs had to compete with each other for their share. Since a woman's life was centred around her reproductive organs it meant that these organs developed at the expense of all the other organs. The result of such distribution of energy left the woman strong enough to bear children, but weak in every other way. This theory implied that the woman could never be physically or intellectually superior to a man who did not lose out his energy on reproductive functions. As a further development of the theory, it was postulated that the ovaries were central to the woman's being. The ovaries determined the personality traits of the woman and these could range from irritability to insanity. In textbooks and in actual medical practice, doctors found uterine and ovarian problems behind every female complaint be they headaches, sore throat or tuberculosis.

Although all these could be dismissed as part of the deep medical ignorance of the times, it did not prevent the medical profession from carrying out treatment which were specifically designed to alter female behaviour. Treatment for female invalidism included isolation, prolonged rest, clitorectomy and ovariotomy. Ehrenreich and English point out that this was in effect a surveillance system through

which the doctors could detect the first signs of rebelliousness and could interpret them as symptoms of disease, and hence, curable.

But the theories and medications could not be applied to working-class women. They had neither the time nor the money to indulge in female invalidism and their labour was essential for the growth of capital. Medical theory came up with an explanation based on racial differences : These women (mostly blacks and immigrants from Europe) were congenitally inferior to the white Anglo-Saxon protestants in that they had smaller brains, larger muscles and a host of inherited social traits. They were considered to be free from uterine diseases and were supposed to have robust healthy babies. Although these working-class women were not 'sick' they were 'sickening' to other classes. They bred disease and were the reservoir of infection. The danger of coming in contact with working-class women was especially great for upper classes for they often worked as maids in the homes of the upper class and as prostitutes. Thus medical theory proposed two seperate biological reasons to explain and justify the social roles of these two classes.

Sexism in Current Medical Practice

It could be argued that all this took place in the distant past at a time when the scientific foundation of medicine was still being laid and that the content of medicine itself has changed since then. Such an argument would be valid only if it was possible to prove that the later devlopments in medicine were not influenced by sexist prejudices. But a review of medical literature reveals that sexism is still dominant in the interaction between 'medicine' women, and medicine still continues to rationalise and to dictate social norms to women.

It would have been difficult to substantiate these statements had they been made say, twenty years ago, because then the ultimate pronouncements on woman's 'nature' still came from the doctors. But the militant feminist movement in the west has been powerful enough to draw the attention of academicians to provide the much-needed data. The following quotes are taken from **studies conducted in US and in England and are relevant to India as well, for the teaching and practice of medicine is not very different and students follow the same textbooks.** Doctors continue to view women patients as hysterical, irrational and incapable of making decisions. ". . . . . women's illnesses are psychosomatic until proven otherwise".

"Following traditional linguistic convention, patients in most medical school lectures are referred

> *"Primary dysmenorrhoea is dismissed as being psychogenic, although it affects 50 percent of women"*

to exclusively by the male pronoun 'he'. There is, however a notable exception: in discussing a hypothetical patient whose disease is of psychogenic origin, the lecturer often automatically uses 'she'. For it is widely taught, both explicitly and implicitly, that women patients (when they receive notice at all) have uninteresting illnesses are unreliable historians and are beset by such emotionality that their symptoms are unlikely to reflect 'real' disease."

" Woman as compared to men are more likely to have their depression treated by drugs than to be helped to overcome the causes of their distress". (Howell, 1974)

Work up by physicians in response to five common complaints in a sample of 104 men and women - 52 married couples — were evaluated by chart audit. For the total group of complaints, back pain, headache, dizziness, chest pain and fatigue, the physicians' work ups were significantly more extensive for men than they were for women. These data tend to support the argument that male physicians take medical illness more seriously in men than in women. (Armitage et al, 1979)

Most complaints which are termed women's complaints (because they refer to their reproductive tracts) are often dismissed as being of purely psychogenic origin. Primary dysmenorrhoea is one such gynaecological complaint which though it affects about 50 per cent of women, is considered partly or wholly psychogenic. This is inspite of the fact that the origin of pain is still unknown.

"One gains little conviction in relation to most of the literature (regarding dysmenorrhoea) especially in respect of management. To illustrate an extreme, one recent study advises physicians not to trust empiric diagnoses of dysfunctional dysmenorrhoea, but to inspect the peritoneal cavity by culdoscope and to expect often to find free (menstrual ?) blood as the cause of the pain. Actually, one is finally driven to the conclusion that theories concerning intrinsic dysmenorrhoea in early menstruation are as conflicting as are countless methods and medications which are claimed as being helpful. Hardly, a day or a medical journal, goes by which does not offer a new near-panacea whose rationale conflicts with many

others. **It reflects more essentially the psychosomatic ineffectiveness of the proscribing physician, and in general the results are not superior to our sage advices at the beginning of the century"** (Jones).

The psychogenic theory of primary dysmenorrhoea however is very definite : "It is generally acknowledged that this condition, is much more frequent in the highstrung, nervous or neurotic female than in her stabler sister." (Lennane and Lennane 1973).

"Faulty outlook leading to an exaggeration of minor discomfort . . . . may even be an excuse to avoid doing something that is disliked". Or more simply, "The pain is always secondary to an emotional problem." (Lennane and Lennane 1973).

In refuting these theories Jean Lennane and John Lennane have this to say : "There is no valid basis for this attitude. These authors are not referring merely to the effect that the personality of the patient may have on the amount of suffering or complaints occurring in any organic illness, but are implying or directly stating, that the patients' faulty outlook is causing the condition.

"If the pain is the result of 'faulty outlook' one would expect it to start at the time of the initial psychic shock (menarche), and not two to four years later. The pain is dependent on the occurrence of ovulation and is reliably and usually completely removed by suppression of ovulation (92 per cent of severe cases in one study) Perhaps the few who do not respond to ovulation suppression might be psychologically disturbed, but in practice, psychosomatic study and psychometric tests do not confirm this hypothesis. Scientific supporting evidence is completely absent e. g. a prospective study of pubescent girls, or of menstruating girls who were not yet ovulating. Evidence when offered, is scanty. **'A dysmenorrhoic mother usually has a dysmenorrhoic daughter'** which, if true (no statistical confirmation is offered), would more usually be taken to indicate a hereditary factor.

"The attitude to treatment may also be unusual.. 'very little can be done for the patient who prefers to use menstrual symptoms as a monthly refuge from responsibility and effort'. The patient with visceral colic is treated with rest and relief of pain; the patient who persists in having severe dysmenorrhoea may be denied both." (Lennane and Lennane, 1973)

The following quote also shows how women's gynaecological complaints are seen as unimportant and not worthy of medical attention. "Majority of the women in our country are housewives. In most

"Mistaken and misleading beliefs about female sexuality continued to dominate medical theories until the late 70s"

of the other countries women do as much office work as men and in addition do the duties of housewives. Thus Indian women have more 'spare time'. Since majority of them have no other activities or hobbies and do not do any reading (being uneducated) **they spend most of their spare time concentrating on their vaginal discharge"**. (emphasis ours) (Kapoor, 1976). The underlying attitude that will be encouraged in general practitioners is self-evident. It is also significant that leucorrhoea (vaginal white discharge) is the only common gynec problem discussed in the book.

In fact, it is not too farfetched to say that almost every second gynaecological complaint is viewed with suspicion as being fictitious and just a figment of the imagination. Here is what Lennane and Lennane say with regard to nausea of pregnancy : "A well-defined clinical entity occurring in 75 to 88 per cent of pregnant women. The exact cause remains unknown. The condition is nevertheless commonly held to be partly or wholly psychogenic again without any scientific supporting evidence. Few will deny that the psychogenic factor is of prime importance, and it is probable that many adjustments demanded of the newly-pregnant woman impose a mild condition of stress coupled with an irrationally exaggerated fear of the obstetric hazards confronting her, especially that of producing an abnormal child. Classified with the neuroses (nausea of pregnancy) may indicate resentment, ambivalence and inadequacy in women ill-prepared for motherhood" . . . . . " Nearly all pregnant women see a doctor and to classify up to 88 per cent of patients with a particular organic condition (pregnancy) as neurotic is unusual in the extreme" . . "its severity in multiple pregnancy and hydatidiform mole contradict the neurosis theory, unless it is postulated that the patient can subconsciously and definitely diagnose these conditions as early as the fourth week" (Lennane and Lennane, 1973).

Female sexuality has always been a source of concern in all patriarchal societies. Medical theories of the late 19th and early 20th century drew a rigid distinction between reproductivity and sexuality. It was believed that the development of reproductive powers and of the maternal instincts could only take place when sexuality itself was suppressed. Women

were told (by medical theoreticians) that sexual feelings were 'unnatural, unwomanly pathological and probably detrimental to the supreme function of reproduction". These beliefs continued to dominate medical theories till as late as the 'seventies, even after Master's and Johnson's findings had revolutionised the understanding of female sexuality. According to Scully and Bart (1973) who reviewed 27 general gynaecological textbooks published in the US from 1943 to 1972: "... examination of gynaecological textbooks, one of the primary professional socialisation agents for practitioners in the field, revealed a persistent bias towards a greater concern with the patient's husband than with the patient herself. Women are consistently described as anatomically destined to be happy. So gynaecology appears to be another of the forces committed to maintaining traditional sex role stereotypes, in the interest of men and from a male perspective."

In the textbooks published between 1963-72: " Eight (of the textbooks) continued to state, contrary to Master's and Johnson's findings, that the male sex drive was stronger and six still maintained that procreation was the major function of sex for the female. Two said that most women were 'frigid' and another stated that one-third were sexually unresponsive..... when they (the book) deal with the subject (sex role) the traditional female sex role is preferred. Thus Jeffcoate states 'An important feature of sex desire in the man is the urge to dominate the women and subjugate her to his will; in the women, acquiescence to the masterful takes a high place'. In 1971 we read: 'the traits that compose the core of the female personality are feminine narcissism, masochism and passivity '... A 1970 text states, 'The frequency of intercourse depends entirely upon the male sex drive. The bride should be advised to allow her husband's sex drive to set their pace and she should attempt to gear hers satisfactorily to his. If she finds, after several months or years that this is not possible, she be advised to consult her physician as soon as she realises there is a real problem'. The gynaecologist's self-image as helpful to women combined with unbelievable condescension is epitomised in this remark: "If like all human beings he (the gynaecologist) is made in the image of the Almighty and if he is kind, then his kindness and concern for his patient may provide her with a glimpse of God's image."

Medical attitudes have changed little in spite of the criticisms which have been the outcome of the feminist movement. A recent example is the breast feeding campaign which has merely incorporated the new attitude of society towards women,

"The advocates of the breast feeding campaign reinforce the idea of the main role of women being to reproduce and nourish at the cost of self"

but has not changed its fundamental sexist ideology.

For many years the infant formula companies had peddled breast milk substitutes as an expression of mother's love They had played upon the image of women as sex objects who in order to be desirable had to be depilated, deodorised, and have well-shaped and firm breasts. The counter propoganda (of the breast feeding campaign) tries to allay the fears of the mother about the shape of her breast by reassuring her that breast feeding will, in fact, make her more shapely.

"Contrary to the old wives's tales that nursing makes breasts sag (age and gravity do that), breast feeding actually helps women to get their bodies back in shape after childbirth. It helps the uterus return to its pre-pregnancy condition and facilitates loss of excess weight gained during pregnancy. It promotes a deep feeling of warmth and attachment between mother and baby, and many women report the physical sensations of breast feeding are pleasurable" (UNICEF, 1981). The issue is not whether the technical content of the quote is correct or not, but that the images it uses and reinforces are as sexist as 'organised' commercial advertisement. The advocates of this campaign also reinforce the idea of the main role of women as being to reproduce and to nourish at the cost of self.

' Lactation offers the opportunity of giving 'self.' to feed an infant, instead of feeding through the medium of the substitute glass bottle, rubber nipple and compounded baby formula. To this end successful lactation is indeed, a worthy and noble goal for the physician to inspire" (Applebaum, 1970). And further,

"The remarkable ability of poor women to breast feed their babies for prolonged periods is the most redeeming feature in an otherwise bleak nutritional status of many developing countries" (Gopalan, quoted UNICEF)

Conclusions

A woman is by definition 'emotional'. For long it was believed that a woman's emotions were controlled by her womb and a disturbance in the womb

led to a hysterical state. Modern thinking has reversed this understanding. It is believed now that emotions acting through hypothalamus effect menstrual function considerably.

The process of professionalisation includes learning attitudes about work, about relations with colleagues and about patients or clients. In medicne these attituides are strongly coloured by a demeaning regard for women. For, after all, such attitudes about women are pervasive in society and moreover the medical profession has been virtually a male monopoly. This may be disputed in India since the majority of gynaecologists here are women. Unfortunately, they too have imbibed the sexist values in society. We are all products of our cultural expectations---- and our culture devalues women.

The answer does not lie in doing away with gynaecologists. The more mature way would be : (i) to recognise inadequacies that exist in our knowledge and be more open and receptive to women's personal experiences; (ii) to redirect research priorities and focus on problems that women consider as important; (iii) to end the medical monopoly of knowledge about women's physiology, their illnesses. Only then can we hope that medicine will serve those who need it most.

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(Contd from Page 52)

does witch-hunting take place with greater frequency during certain seasons? There are no simple answers. This article looks at the entire complex fabric of the adivasi's way of life, the status of women, and how factors such as deforestation, modern diseases, increasing unemployment and impoverishment and a deterioration and disappearance of trbial knowledge of medicine may be generating a set of circumstances which could perpetuate and strengthen the belief in the bhutalis and thus lead to increasing persecution of women. We especially ask readers to respond to this article.

Our focus throughout the issue is on women as consumers of health care. Women also comprise a large proportion of the providers of health care and we hope to devote a seperate issue to the topic sometime. We hope you find this glimpse of the many health issues which concerrn women, insteresting.

padma prakash

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WOMEN, HEALTH AND MEDICINE

barbara katz rothman

Until pregnancy and childbirth were defined as medical events, midwifery was in no sense a branch, area or interest of medicine as a profession. The expansion of scientific medicine converted normal physical changes of pregnancy and others into medical problems devoid of their larger socio-emotional content. The displacement of the midwife by the male obstetrician resulted not from any ideological struggle or 'scientific' advancement but from the control that physicians exercised through their professional associations. The treatment of the body as a machine and the lesser functional importance assigned to women constituted a basis for exercising the overt social control over women through the surgical removal of her various sexual organs and by creating physical deformities in her. The author argues that the alternative to the mechanical model of taking the female system as a complication of so-called biological stability of the non-cycling male, is to take the female as working norm for the female system.

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Women are not only people : *woman* is a subject one can study, even specialize in within medicine. Obstetricians and gynecologists are medicine's and perhaps society's generally recognized "experts" on the subject of women, especially women's bodies: our health, reproductive functioning, and sexuality.[1] Obstetrics is the branch of medicine concerning the care of women during pregnancy, labor, and the time surrounding childbirth,[2] similar in some ways to midwifery. Gynecology is the "science of the diseases of women, especially those affecting the sex organs."[3] There is no comparable "science" of the study of men, *their* diseases and/or reproductive functions. An attempt by urologists in 1819 to develop an "andrology" specialty came to nothing.[4]

At its simplest, we can think of a medical specialty as arising out of pre-existing needs. People have heart attacks : the medical specialty of cardiology develops. Or the amount of knowledge generated in a field grows so enormously that no one person can hope to master it all: physicians "carve out" their own areas of specialization. Increasing knowledge about cancer thus led to the specialty of oncology, and subspecialities within oncology.

But the development of a medical specialty is not necessarily the creation of a key for an already existing lock. Medical "needs" do not necessarily predate the specialty, even though the specialty is presumably organized to meet those needs. This has been made quite clear in the work of Thomas Szaz on the relatively recent expansion of medicine into such "social problem" areas as alcoholism, gambling and suicide.[5] Medicine doesn't have the "cures" for these problems but by defining them in medical terms, as sickness, the physician gains political control over the societal response: punishment becomes "treatment ', desired or not, successful or not. Similarly, medical control over childbirth, lactation, menopause, and other women's health issues was not based on superior ability to deal with these concerns.

The case of Jacoba Felice de Almania, a woman tried for the illegal practice of medicine in 1322 illustrates this point. In her defense Jacoba Felice de Almania had witnesses who testified that she never charged unless she cured, and that her cures were successful where other "legal" (male) practitioners had failed. However, since she had not attended a medical school (medical schools being closed to women) she was not licensed to practice medicine. That she saw women who did not want to go to a male practitioner, that she was successful did not matter. "Efficacy of treatment was not the criteria for determining who was or was not a legitimate medical practitioner, but the educational requirements and membership in the faculty of an organized group were the most important factors."[6] In essence, what professional control over medicine says is, "We may not be able to help you, but we are the only ones qualified to try."

Vern Bullough, in his analysis of the development of medicine as a profession, writes that during the middle ages, "One obvious group outside of the control of the university physician was the midwife, but during the period under study the university physician generally ignored this whole *area of medicine*. Midwives might or might not be qualified, but this *was not a matter of public concern* (emphasis added)".[7] More accurately, one might state not that physicians ignored this "area of medicine," but that midwifery and its concerns were outside of medicine, just as matters that were

undoubtedly of concern *to women* existed outside of the "public" concern. Until pregnancy and childbirth were defined as medical events, midwifery was in no sense a branch, area, or interest of medicine as a profession.

Medical expansion into the area of childbirth began before the development of asepsis, surgical techniques, anesthesia; any of what we now consider the contributions of obstetrics. And yet, even without the technology, by the beginning of the nineteenth century medicine had begun the redefinition of childbirth from a family or religous event to a medical one, needing medical presence for its safe conduct.[8]

Midwives treated childbirth in the larger context of women's lives. Midwives did not and do not deliver babies. They teach women how to give birth. Brack has called the role of midwife "total" —she helped in the socialization of the mother to her new status, both as teacher and as role model. "The midwife's relation to the woman was both diffuse and affective, while the physician role demanded specificity and affective neutrality".[9] Midwives taught how to birth babies, how to nurse them, how to care for the babies and for the mother's own body. Physicians deliver babies and move on. The physician "isolated the laboring woman and her delivery of the infant from the rest of the childbearing experience, and defined it as a medical and surgical event which required specialized knowledge."[10] As one modern nurse—midwife has said of obstetrics residents : "They want us to stay with the woman in labor and just call them when she's ready to deliver. To them, that's the whole thing."

At the time that physicians were taking over control of childbirth, it is virtually unarguable that the non-interventionist, supportive techniques of the midwives were safer for both the birthing woman and her baby. The physicians' approaches included bleeding to "syncope" (until the woman fainted), tobacco infusion enemas, frequent non-sterile examinations, and other surgical and chemical interventions.[11] In the 1910's and 20's, as American physicians successfully ousted midwives, the midwives' safety records remained better than the physicians. In Newark a midwifery program in 1914-16 achieved maternal mortality rates as low as 1.7 per thousand, while in Boston, where midwives were banned, the rates were 6.5 per 1000. Similarly, infant mortality rates in Newark were 8.5 per 1000 contrasted with 37.4 in Boston.[12] In Washington, as the percentage of births reported by midwives shrank from 50 percent in 1903 to 15 percent in 1912, infant mortality in the first day, first week, and first month of life all increased. New York's dwindling corps of midwives did significantly better than did New York doctors in preventing both stillbirths and post—partum infection.[13]

"... midwifery and its concerns were outside of medicine, just as matters that were undoubtedly of concern to women existed outside of the public concern".

The physician's separation of the "delivery" of the baby from its larger socio-emotional context has its roots as far back as Rene Descartes concept of mind-body dualism. To Descartes, the body was a machine whose structure and operation falls within the province of human knowledge, as distinguished from the mind which God alone can know. Though even the Hippocratic principles state that the mind and body should be considered together, "Experience shows that most physicians . . . irrespective of their professional activites and philosophical views on the nature of the mind, behave in practice as if they were still Cartesian dualists. Their conservative attitudes are largely a matter of practical convenience."[14]

The medical models used for convenience are that diseases are the bad-guys which the good-guy medications can take care of; that the body breaks down and needs repair; that repair can be done in the hospital like a car in the shop; and that once "fixed," the person can be returned to the community. The earliest models were largely mechanical; later models worked more with chemistry; and newer more sophisticated medical writing describes computer-like programming; but the basic points remain the same. It was a useful model when dealing with the problems facing medicine at the turn of the century : primarily bacterial and viral disease-causing agents and simple accidents and trauma. It has never worked well for understanding the problems that women face in dealing with doctors, including the experience of childbirth. While midwifery was learned by apprentice, doctors were instructed in the use of forceps, as well as techniques of normal delivery, by "book learning," by discussion, the use of wooden models, and infrequently by watching another doctor at work. Wertz, in her study of the development of obstetrics, has pointed out that "By regarding the female body as a machine, European doctors found that they could measure the birth canal and predict whether or not the child could pass through.'[15] Stories of women delivering while their doctors scrubbed for a Caesarian section were told, probably

«... the female gonads were removed not when women were «too female« that is, too passive or dependent, but when women were too masculine-assertive, aggressive, unruly...»

with much relish, and similar stories continue to be part of the lore of midwifery. Among the stories midwives tell each other are the tales of women who were told that they could never deliver vaginally, and then went on to have normal births of oversized babies.

In the nineteenth and early twentieth centuries midwives and physicians were in direct competition for patients, and not only for their fees. Newer, more clinically oriented medical training demanded "teaching material," so that even the immigrant and poor women were desired as patients. [15] The displacement of the midwife by the male obstetrician can be better understood in terms of this competition than as an ideological struggle or as "scientific advancement." Physicians, unlike the unorganized, disenfranchised midwives, had access to the power of the state through their professional associations. They were thus able to control licensing legislation, in state after state restricting the midwife's sphere of activity and imposing legal sanctions against her.[17]

The legislative changes were backed up by the attempt to win public disapproval for midwifery and support for obstetrics. Physicians accused midwives of ignorance and incompetence, and attacked midwifery practices as "meddlesome." Rather than upgrading the midwives and teaching the skills physicians thought necessary, the profession of medicine refused to train women either as midwives or as physicians. [18] Physicians argued repeatedly that medicine was the appropriate profession to handle birth because "normal pregnancy and parturition are exceptions and to consider them to be normal physiologic conditions was a fallacy." [19] Childbirth became redefined as a medical rather than a social event, and the roles and care surrounding it were reorganized to suit medical needs.[20]

Once professional dominance was established in the area of childbirth, obstetrics rapidly expanded into the relatively more sophisticated area of gynecology. The great obstetricians of the nineteenth century were invariably gynecologists [21] (and of course all men). Among other effects, this linking of obstetrics and gynecology further reinforced the obstetrical orientation toward pathology.

One of the earliest uses of the developing field of gynecology was the overt social control of women through surgical removal of various of her sexual organs. Surgical removal of the clitoris (clitoridectomy) or less dramatically, its foreskin (circumcision) and removal of the ovaries (oopherectomy or castration) were used to check women's "mental disorders." The first gynecologist to do a clitoridectomy was an Englishman, in 1858. [22] In England, the procedure was harshly criticised, and not repeated by others after the death of the originator in 1860. In America, however, clitoridectomies were done regularly from the late 1960's through till at least 1904 [23] and then sporadically until as recently as the late 1940's. [24] The procedure was used to terminate sexual desire or sexual behavior something deemed pathological in women. Circumcisions were done on women of all ages to stop masturbation up until at least 1937.[25]

More widespread than clitoridectomies or circumcisions were oopherectomies for psychological "disorders". Interestingly the female gonads were removed not when women were "too female" — i.e., too passive or dependent, but when women were too masculine—assertive, aggressive, "unruly." Oopherectomies for "psychiatric" reasons were done in America between 1872 and 1946. [26] (By the 1940's perfrontal lobotomies were gaining acceptance as psychosurgery.)

The developing medical control of women was not limited to extreme cures for psychiatric problems. The physical health and stability of even the most well-adjusted, lady-like women was questioned. Simply by virtue of gender, women were (and are) subject to illness labeling.

One explanation for women's vulnerability to illness labeling lies in the functionalist approach to the sociology of health. Talcott Parsons has pointed out that it is a functional requirement of any social system that there be a basic level of health of its members.[27] Any definition of illness that is too lenient would disqualify too many people from fulfilling their functions and would impose severe strains on the social system. System changes, such as war, can make changes in standards of health and illness generally set for members. This works on an individual level as well, standards of health and illness being related to social demands, a mild headache will excuse a student from attending class, but not from taking final exams. A logical extension of this is that the less valued a person or group's contribution to society, the more easily they are labeled ill.

Women are not always seen as functional members of society, as people doing important

things. This has historically and cross—culturally been especially true of the women of the upper classes in patriarchal societies, where it is a mark of status for a man to be able to afford to keep a wife who is not performing any useful function. A clear, if horrifying, example of this is the traditional Chinese practice of foot-binding. By crippling girls, men were able to show that they could afford to have wives and daughters who do nothing. It is a particularly disturbing example of conspicuous consumption. But we do not have to turn to faraway places to see women defined as useless. In Ehrenreich and English's historical analysis of the woman patient *Complaints and Disorders*, they speak of the late nineteenth and early twentieth century "lady of leisure." "She was the social ornament that proved a man's success; her idleness, her delicacy, her childlike ignorance of 'reality' gave a man the 'class' that money alone could not provide."[28]

The practice of creating physical deformity in women can be seen in our history as well. A woman researcher who studied menstrual problems among college women between 1890 and 1920 found that women in the earlier period probably were somewhat incapacitated by menstruation, just as the gynecologists of the day were claiming. However, she did not attribute the menstrual problems to women's "inherent disabilities" or "overgrowth of the intellect" as did the male physicians. She related it to dress styles. Women in the 1890's carried some fifteen pounds of skirts and petticoats, hanging from a tightly corseted waist. As skirts got lighter and waists were allowed to be larger, menstruation ceased to be the problem it had been.[29] In the interest of science, women might try the experiment of buckling themselves into a painfully small belt and hanging a fifteen pound weight from it. One might expect weakness, fatigue, shortness of breath, even fainting: all the physical symptoms of women's "inherent" disability. And consider further the effects of bleeding as a treatment for the problem.

It follows from Parson's analysis that in addition to actually creating physical disability (the bound feet of the Chinese, the deforming corsetry of our own histrory), women were more easily *defined* as sick when they were not seen as functional social members. At the same time in our history that the upper class women were "delicate", "sickly" and "frail," the working class women were well enough to perform the physical labor of housework, both their own and the upper classes as well as to work in the factories and fields. Because "...however sick or tired working class women might have been, they certainly did not have the time or money to support a cult of invalidism. Employers gave no time off for pregnancy or recovery from childbirth, much less for menstrual periods, though the wives of these same employers often retired to bed on all these occasions."[30] The working class women were seen as strong and healthy, and for them, pregnancy, menstruation, and menopause were not allowed to be incapacitating.

These two themes: **the treatment of the body as a machine, and the lesser functional importance assigned to women, still account for much of the medical treatment of women.**

Contemporary physicians do not usually speak of the normal female reproductive function as diseases. The exception, to be discussed below, is menopause. The other specifically female reproductive functions—menstruation, pregnancy, childbirth, and lactation—are regularly asserted in medical texts to be normal and healthy phenomena. However, these statements are made within the context of teaching the medical "management," "care," "supervision," and "treatment" of each of these 'conditions."

Understood in limited mechanical terms, each of these normal female conditions or happenings is a complication, stress on an otherwise normal system. Medicine has fared no better than any other discipline in arriving at a working model of women that does not take men as the comparative norm.

For example, while menstruation is no longer viewed as a disease, it is seen as a complication in the female system, contrasted to the reputed biologic stability of the supposedly noncycling male.[31] As recently as 1961 the American Journal of Obstetrics and Gynecology was still referring to women's "inherent disabilities" in explanations of menstruation:

> Women are known to suffer at least some inconvenience during certain phases of the reproductive cycle, and often with considerable mental and physical distress. Woman's awareness of her inherent disabilities is thought to create added mental and in turn physical changes in the total body response, and there result problems that concern the physician who must deal with them.[32]

Research on contraception displays the same mechanistic biases. The claim has been made that contraceptive research has concentrated on the female rather than the male because of the sheer number of potentially vulnerable links in the female chain of reproductive events.[33] Reproduction is

«Reproduction is dealt with not as a complicated organic process, but as a series of discrete points, like stations on an assembly line, with more for female than for male».

clearly a more complicated process for the female than the male. While we might claim that it is safer to intefrere in a simpler process, medicine has tended to view the number of points in the female reproductive process as distinct entities. Reproduction is dealt with not as a complicated organic process but as a series of discrete points, like stations on an assembly line, with more for female than for male.

The alternative to taking the female system as a complication of the "basic" or "simpler" male system is of course to take female as the working norm. In this approach, a pregnant woman is compared only to pregnant women, a lactating breast compared only to other lactating breasts. Pregnancy, lactation, etc. are accepted not only as nominally healthy variations, but as truly normal states. To take the example of pregnancy, women *are* pregnant; it's not something they "have" or "catch" or even "contain". Pregnancy involves physical change; they are not, as medical texts frequently call them, "symptoms" of pregnancy. Pregnancy is not a disease; its changes are no more "symptoms" than the growth spurt or development of pubic hair are "symptomatic" of puberty. There may be diseases or complications of pregnancy, but the pregnancy itself is neither disease nor complication.

In contrast, the working model of pregnancy that medicine has arrived at is that a pregnant woman is a woman with an insulated parasitic capsule growing inside. The pregnancy, while physically located within the woman, is still seen as "external" to her, not a part of her. The capsule within has been seen as virtually omniscient and omnipotent, reaching out and taking what it needs from the mother-host, at her expense if necessary while protected from all that is bad or harmful.

The pregnancy, in this medical model, is almost entirely a mechanical event in the mother. She differs from the nonpregnant only in the presence of this thing growing inside her. Difference other than the mechanical are accordingly seen as symptoms to be treated, so that the woman can be kept as "normal" as possible through the "stress" of the pregnancy. Pregnancy is not necessarily inherently unhealthy in this model, but it is frequently associated with changes other than the growth of the uterus and its contents, and these changes are seen as unhealthy. For example, haemoglobin (iron) is lower in pregnant women than nonpregnant, making pregnant women appear (by non-pregnant standards) anemic. They are then treated for this anemia with iron supplements. Water retention, or edema, is greater in pregnant women than non-pregnant, and they are treated with limits placed on their salt intake and with diuretics. Pregnant women tend to gain weight over that accounted for by the fetus, placenta and amniotic fluid. They are treated for this weight gain with strict diets, sometimes even with "diet pills". And knowing that these changes are likely to occur in pregnant women, American doctors have tried to treat all pregnant women with iron supplements, limits on salt and calorie intake, and many with diuretics, in the name of "preventive medicine".

What is particularly important to note is that these "treatments" of entirely normal phenomena are frequently not perceived by the medical profession as interventions or disruptions. Rather, the physician sees himself as assisting nature, restoring the woman to normality. Bogden, in her study of the development of obstetrics, reports that an 1800's non-interventionist physician, as opposed to a "regular" physician, would give a laboring woman a catheter, some castor oil or milk of magnesia, bleed her a pint or so, administer ergot, use poultices to blister her, and "Any of these therapies would be administered in the interests of setting the parturient up for an easier, less painful labor and delivery, while still holding to the belief that the physician was letting nature take its course." [34] Wertz says that currently medicine has redefined "natural childbirth" in response to consumer demand for it to include any of the following techniques : spinal or epidural anesthesia, inhalation anesthesia in the second stage of labor, forceps, epesiotomy, induced labor. [35] Each of these techniques increases the risk of childbirth for mothers and babies. [36] Under the title "Normal Delivery," an obstetric teaching film purports to show "the use of various drugs and procedures used to facilitate normal delivery." Another "Normal Delivery" film is 'a demonstration of a normal, spontaneous delivery: including a paracervical block, epesiotomy . . . ."

The use of estrogens provides an even better example of how medicine views the body as a machine that can be "run" or "managed" without being changed. Estrogens are female hormones; in medicine they are seen as femininty in a jar. In the widely selling *Feminin Forever*, Dr. Robert A. Wilson,

«The model of the body as a machine, which can be regulated, controlled, and «managed» by medical treatments, is not working. «Feminity» or physical »femaleness« is not something that comes in a jar and can be manipulated».

pushing "estrogen replacement the rapy" for all menopausal women, calls estrogen levels as detected by examination of cells from the vagina, a woman's "femininity index." As estrogen levels naturally drop off after menopause a women is according to Dr. Wilson, losing her "femininity. Interestingly, estrogen levels are also quite low while a woman is breast-feeding, something not usually socially linked to a "loss of femininity."

Menopause remains the one normal female process that is so overtly referred to as a "disease', in the medical literature. To some physicians, menopause is a *deficiency disease*, and the use of estrogen restoring the woman to her "normal" condition. Here we must reconsider the question of women's functional importance in the social system. Middle-aged housewives have been called the last of the "lady of leisure," having outlived their social usefulness as wife-mothers, and having been allowed no alternatives. While oopherectomies and clitorectomies are no longer being done on upper class women as they were a hundred years ago, to "cure" all kinds of dubious "ills," older women are having hysterectomies, (surgical removal of the uterus) at alarming rates. [3] Much more typical of modern medicine, however, is the use of chemical rather than surgical "therapy." Because the social changes and demands for readjustment of middle age roughly coincide with the time of menopause, menopause becomes the "illness" for which women can be treated.

Estrogens have been used in virtually every stage of the female reproductive cycle, and usually with the argument that they return the woman to normal or are a "natural" treatment. Estrogens are used in puberty, to keep girls from getting "unnaturally" tall; to treat painful menstruation; as contraception, supposedly mimicing pregnancy; as a chemical abortion in the "morning after" pill; to replace supposedly missing hormones and thus to prevent miscarriages; to dry up milk and return women to "normal" nonlactating state and in menopause to return women to the "normal" cycling state. For all the claims of normality and "natural" treatment, at this writing approximately half of these uses of estrogens have been shown to cause cancer. The use of estrogens in pregnancy was the first to be proven carcinogenic: daughters of women who had taken estrogens (notably DES, a particular synthetic estrogen) are at risk for the development of a rare cancer of the vagina [10] The sequential birth control pill was taken off the market as the danger of cancer of the lining of the uterus (endometrial cancer) become known, and similarly estrogens taken in menopause have been shown to increase the risk of endometrial cancer by as much as fourteen times after seven years of use. [21]

The model of the body as a machine, which can be regulated, controlled, and "managed" by medical treatments, is not working. "Femininity" or physical "femaleness" is not something that comes in a jar and can be manipulated.

Nor are women accepting the relegation to secondary functional importance, as wives and mothers of men. In rejecting the viewpoint that we bear men's children for them, we are reclaiming our bodies. When pregnancy is seen not as the presence of a (man's) fetus in a woman, but as a condition of the woman herself, attitudes toward contraception, infertility, abortion, and childbirth all change. When pregnancy is perceived as a condition of the woman then abortion, for example, is primarily a response to that condition.

The women's health movement has grown as an important part of the women's liberation movement. In some of its work, the movement has been geared toward consumerism within medicine, seeking better medical care and a wide range of services for women. While better trained, more knowledgeable and more *humane* physicians are a high priority, what the self-help and lay midwifery groups are doing goes much deeper than that. I believe that these women are reconstructing the pre-obstetrics and gynecology model of women's health. They are redefining women's health in fundamentally women's terms.

Women's self-help groups and clinics are teaching women how to examine their own bodies, not in the never-ending search for pathology in which physicians are trained, but to learn more about health. Medical technology and physicians are clearly useful in treating illness, but do we really want physicians to be "treating" health? It is entirely possible for a woman to fit herself for a diaphragm, do a pap smear and a breast examination (all with help and instruction if she needs it) and never adopt the "patient" role. It is also possible for a woman to go through a pregnancy and birth he

baby with good, knowledgeable, *caring* help, but without becoming a "patient" under the "supervision" of a physician.

Redefining normality within the context of the female reproductive sytstem will take time. We have all been imbued with the medical model of women's bodies and health and it is hard to work past that. Redefining women in women's terms is not a problem unique to health. It is an esential feminist issue.

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Books in Print

Rational Drug Therapy : The Arogya Dakshata Mandal, 1913 Sadashiv Peth, Pune 411 030 is to publish in August, 1984 a booklet highlighting recent advances in the treatment of common dieases, rational approach to treatment, side effects of drugs, clinical diagnosis of common diseases etc. This is meant to act as a physician's desk reference for day-to-day practice. For further information write to Dr. A R. Patwardhan at the above address.

The Mandal also publishes a monthly information sheet the *Pune Journal of Continuing Health Education which* is designed to 'present scientific information and opinion to the medical profession to stimulate thought and further invistigation.' Subscription rate : Rs. 10 a year.

Book News

Our Jobs, Our Health : A woman's guide to occupational health and safety, Boston Women's Health Book Collective, Boston USA: The book shows how to recognise hazards in the work place It provides basic information about toxic chemical stress, job design, cancer and hazard control. The section of reproductive issues in the work place describes how workplace conditions can damage the reproductive health of both men and women. Finally it discusses legal rights and some strategies that can be used to win health and safety improvements in the work place. Available for reference at the Centre for Education and Documentation, 3 Suleman Chambers, 4 Battery Street, Behind Regal Cinema, Bombay 400 039

"WOMEN'S HEALTH IS WOMEN'S CONCERN"
A Brief Overview of Health Issues in the Women's Movement

nirmala sathe

Women's health status is closely linked to their social status. Even though the 'ideal' woman is supposed to look weak and delicate, she has to be able to perform all the domestic tasks necessary for the sustenance of the family. Her major role in society is that of a reproductive machine. The feminist movement aims at uniting women to raise their voices against the oppression of these stereotypes. Logically then, health issues concerning women must form an integral part of the women's movement. Why has the movement been generelly apathetic to health issues? The author, a feminist-activist, briefly reviews the sporadic activities concerning women's health and strongly urges that women's health issues should preferably be taken up by women's groups.

All of us have a right to good health. The right to health means not only the right to be free from disease, but also to enjoy physical, mental and emotional well-being. Health cannot be separated from political, cultural or economic systems in which we are living. It cannot be isolated from the roles we are playing and the status we have in society.

My grandmother often used to tell us "Beti, a woman cannot atford sickness. If she does fall sick then she can't complain, but has to bear her illness silently ; for who will tolerate a sick-slave ? ". Many of us have experienced this truth in our own lives or through those of our mothers, grandmothers.

Although it is true that in economically poor classes even the men do not get proper medical aid in sickness, it is the women who are the more neglected group. In fact, even among the economically better off, where it is possible for women to afford good care and proper food, they are found to be weak, or rather not as healthy as they could be. This is because of cultural influences. According to the ideal image of women perpetuated in society, a woman is supposed to be weak and delicate. A 'strong' woman thus becomes, in a sense, the victim of cultural norms. Women are traditionally supposed to eat only after the rest of the family members have eaten and then only what has been left over, even though in poor families it is hardly ever sufficient to keep body and soul together. It will not be an exaggeration to say that she ever gets sufficient rest only on her deathbed.

Menstruation, pregnancy, childbirth, breast-feeding, menopause, all these are considered to be 'women's issues'. In a way society at large has nothing to do with them, because women are not equal members of the society and therefore, complaints about these are treated as, 'psychological' or as 'women's sickness' and are not given the serious consideration they deserve. Doctors and medical professionals produced in this male-dominated society are taught to either close their eyes and ears to such complaints or to immediately connect all women's complaints to their reproductive system. A woman is looked upon as a mere reproductive machine rather than as a human being. Politically also, it is the world-wide phenomenon, that all drives for population control or population increase, breast-feeding or the baby foods campaign have treated women as reproductive machines. Nowhere have these issues been treated in a manner where women's 'health' is given central importance.

In order to understand the location of women's health-issues in the context of feminist movements, it is necessary to broadly define feminism and the feminist movement. Feminism is a new concept in India, a concept not yet well-accepted or understood by the people at large. Broadly speaking one can say that feminism deals with all the aspects of a woman's life and her role in society - - male dominated society. Feminists are interested in changing a hierarchical society and in creating a society where everybody is equal. In today's society, women are at the bottom of the hierarchical structure. In any class, caste or race, whatever their status, women among them are always at the bottom.

No doubt women of the upper classes have more facilities and opportunities than the lower class males, but in their own class they are the least important. Not only that, but because they are women any man from any class can express his superiority as a male member of the patriarchal society. One example is rape.

So the main role of the feminist movement is to unite women to raise their voices against their oppression in a male-dominated society. In her family life, work place, place of education and in all

"Irrespective of educational status, caste or class background, women share the same (health) experience and feelings of inferiority because of their physiology"

the aspects of her life, women have a lower status than men. In our health systems too, the status of women is only as a reproductive machine.

In India, we cannot say that there exists any mass feminist movement. But at the same time it is a fact that there are several women's groups -- feminist groups--who are involved in activities in various areas of women's oppression such as rape, wife-beating, legal reforms and so on. Their activities range from cultural activities to agitational morchas and 'helping' individual women in distress to fight for their rights and the common cause.

But none of these groups have as yet taken health as the prime issue and worked on it. Many of them have touched on one or the other aspect of the issue at some point of time. But there has been no consistency shown regarding the health issues of women. This is because of various reasons which are rooted in our outlook (such as the cultural and social stigma attached to the discussion of women's problems about their bodies.) Many feminists have inhibitions which do not allow them to freely discuss these issues among themselves.

Some groups have made an attempt to raise their voices against oppression through medical systems. For instance, the Women's Centre in Bombay held a meeting with other feminist groups to discuss the effects of "amniocentesis" as a sex-determination test, which gave rise to demands and concerted action in Bombay. Two of these demands were : (1) Amniocentesis facilities should be allowed only in research instituions with proper machinery and control; (2) The government and the medical profession should be brought under pressure to abolish pre-natal sex-determination. It was pointed out that unless and until major social upheaval takes place regarding the status of women in society, female babies will continue to be murdered. *(See article on Amniocentesis.)*

Recently, another meeting was held by the Women's Centre to discuss the issue of Depo-provera, the controversial injectable contraceptive. Womens magazines - feminist ones such as *Baija* (in Marathi) and *Manushi* (in Hindi and English) have given importance to the health and reproductive activity of women by bringing out special issues on the subject. Baija's special issue was on women and health in which the whole proplem had been discussed from the feminist point of view.

Organisations which are working in health such as the People's Science Movement, Medico Friend Circle, (MFC) have also touched on the women's health problems. The Lok Vidnyan Sanghatana, Maharashtra, had prepared an exhibition on women and health which received a tremendous response from various women's groups as well as others working among the toiling masses. This was the first attempt made to discuss the woman's body and her health, reproduction and social biases about it. The exhibition was taken to many villages and it was a thrilling experience to find that women are able to relate to one another while discussing their experiences about their bodies from menstruation to menopause. They were all encouraged by the fact that as women, irrespective of educational status, caste or class background, they have gone through the same experiences and feelings of inferiority because of their physiology. The explanations we had received were shrouded in myth and the actual scientific explanation of the various functions that a woman's body has to perform had been denied us.

The exhibition criticises the social outlook and stigmas attached to the female sex in society and superstitions about women's bodies and child bearing especially with regard to producing male children. Mainly the posters about sex-determination and about fertility, entitled "Who is responsible for not getting a child ?" have made a great impact and have very positively put forward the view that a woman is not wholly, nor mainly responsible. The exhibition emphatically argues that a woman is not merely a reproductive machine. In adivasi areas as well as urban areas like Bombay, Nasik, Pune, Miraj the exhibition attracted large numbers of women.

This exhibition was shown *by* women and *only to* women. It is only in this situation that women can become vocal about their problems. It is very important to realise that women can relate only to other women when it comes to health and their bodies because only women can truly understand one another's problems. I feel very strongly that **women's organisation mainly should handle the issue of women and health, as male activists, although sincerely interested in understanding the problems, are not able to evolve a movement or even a group around the subject.**

"Women's groups should take prime responsibility about women's health issues. Other organisations in health can help in a number of ways....."

At Anand the MFC held an annual meeting in 1983 where many women were called from various groups which were interested in women and health. Majority of the women, who were educated and were working in one or other organisation found it difficult to discuss their problems in the meeting when men were present as even with the desire and sincerity to understand the problems, male participants were unable to understand the intense emotional severity of the problem. At the session where only women were present, there was a live discussion and a free exchange of experiences.

Here I do not intend to devalue the male-activists, who are really helping to raise the voice of women against the medical oppression of women. MFC activists have brought out various articles and debates on the problem. Peoples Science Movement groups have made attempts to make people aware through health exhibitions, the posters and pamphlets on Anaemia. In both the organisations, it is mainly women activists with the help of male activists who have worked very hard for it.

We can conclude that women's organisations should take prime responsibility about the women's health issues, and other organisations in the health area can help them in a number of ways. With this mutual co-operation, one can hope for a strong women's health movement.

The Women's Centre in Bombay is planning to start some health activities. They will be mainly (1) Educational - making women aware of their body and its functions, to help them to tackle the social prejudices and superstitions and to create a healthy outlook about themselves; (2) Preventive ; and (3) Curative - With the help of sympathetic medical proffesionals to help women in preventing and curing health disorders.

Most of us have very little control over the health care system, very little say in the decisions as to what kind of health care is available to us. Women perhaps, are most affected by the health care system or the lack of it. In all phases of our lives, we face difficulties and become the victims of health care system. As potential mothers, as mothers, as housewives, as consumers in order to keep ourselves in accordance with the beauty norms of the society, women are either neglected or misguided by the health care system. To raise our voices against this, women's groups should start (and are actually starting) to organise around health issues. Only this can lead to a strong and united fight against all sorts of oppression in male-dominated society.

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Why Don't We Organise

Sir : It is a happy development that a forum for debating and defending a radical perspective on health care has come into existence. If the first issue is any guide I have no doubt that the forum is going to be an instrument of immense value to socialist activism in the health sphere. Wish you all success !

May I share an idea here regarding what I think is an essential requisite for continuity and accountability in this effort. If the persons interested organise themselves into a society (maybe, Indian society for Socialist Health Care - ISSHC) it gives us an identity, a shared cause for loyalty, and, no less important, a firm ground from which to influence, to bargain, and to relate to other organisations, agencies and governments. Further if the society has at least one Annual Conference it will provide us the much needed person-to-person interaction for enhancing enthusiasm and exchanging ideas.

I would suggest two streams of membership :

Members—All persons qualified and directly engaged in health care, irrespective of their position in the health personnel hierarchy. This includes health visitors, nurses, auxiliary health workers, dentists, pharmacists, physicians, surgeons etc. The other stream of membership will be that of *Associate Members* for all those interested in socialist health care but not directly engaged in health care. This includes teachers, lawyers, politicians, engineers etc., practically anybody from the public.

Dr. N. Janakiramaiah

Asst. Professor of Psychiatry, National Institute of Mental Health & Neuro Sciences, Bangalore 560029

WORKING EDITOR'S REPLY : We share your viewpoint that radical activists working in the field of health or interested in it, need person-to-person interaction for enhancing enthusiasm and exchanging ideas.

But we feel that it would be a terrible mistake to form a separate organisation of socialists interested in health issues. That will be the best way to isolate socialists from the wider movement on health issues. In fact, not marxists but other radicals were the people who gave meaning to radical medical practice while some socialists have only very recently started questioning the official communist view of health i.e. (i) merely more equitable distribution of medical care and (ii) the content of medicine and medical practice as being value free. Therefore no comprehensive marxist understanding of health and health care exists. Genuine (undogmatic and scientific) marxist theory and practice in health can develop only as an outcome of our interaction and work with wider stratas of radical activists.

Fortunately in India, a broad radical thought current does exist — the Medico Friend Circle, and many of us are part of it. Many of us have been and are, actively involved in its activities including its journal the MFC bulletin. The idea of a journal like SHR came from these MFC members not with a sectarian motivation of providing any 'alternative' to the MFC and its bulletin, but to help focus and sharpen the debate amongst the radicals working in health and in turn, widen the basis of radical medical work and of marxist political praxis.

The MFC is a decade old and has helped to radicalise many health workers. We feel it is still relevant and all radical activists experiencing a need for such organisation should join the MFC and be part of the process of radicalisation started by it.

For further information about MFC contact :
Ravi Narayan, Convener
326, Vth Main, Ist Block
Koramangala, Bangalore-560 034

Protest Against Marxist Male Chauvinism

Dear comrades : I am writing to lodge a strong protest against Dhruv Mankad's reference to our joint article (Health Care in a Revolutionary Framework : Possibilities for an Alternative Praxis, SHR 11) as 'Binayak Sen's article' in his editorial perspective (page 3, SHR 1 : 1). *(Contd. on page 71)*

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AMNIOCENTESIS AND FEMALE FOETICIDE
Misuse of Medical Technology

vibhuti patel

Murder of the female child is not new in India. This practice still continues, only the methods of committing such murder have changed. Such practices reflect society's attitude towards the female sex. The patriarchal male-dominated system has evolved modern methods to perpetuate women's oppression in today's socio-economic system. The author analyses the reasons for the popularity of one such modern medical method, amniocentesis, as a pre-natal sex determination test and argues that it is meant to exterminate women and perpetuate their oppression, she also emphasises the need to fight sexist abuse of this medical technique.

Amniocentesis, a scientific technique that was supposed to be used mainly to detect genetic deformities has become very popular in India for detection of the sex of a foetus. For that 15-20 ml of amniotic fluid is taken from the womb by pricking foetus membrane with the help of a special kind of needle. After seperating foetal cell from the amniotic fluid, a chromosomal analysis is conducted on it. This test helps in detecting several genetic disorders like mongolism, defects of neurotube in the foetus, retarded muscular growth, 'Rh' incompatibility, haemophilia and other types of abnormal babies. This test should be conducted on women above 40 years because there are higher chances of mongoloid children produced by such women. In some cases, a sex determination test is required to identify sex-specific deformities such as haemophilia, retarded muscular growth which mainly affect males.

Limitations of Amniocentesis

This test can give 95-97% accurate results. Thus it is not totally reliable. In Harkisandas Hospital and Pearl Centre, Bombay, where this test is conducted on thousands of women, it was noted that the test had affected foetus adversely to 1% of the total number of cases. Thus the test may lead to spontaneous abortions or premature delivery, dislocation of the hips, respiratory complications, needle puncture marks on the baby (Chhachhi & Sathyamala, 1983).

The test is conducted after completion of 16 weeks of pregnancy and within a week the findings are available. In our country, the facility of amniocentesis is available only in big cities like Bombay, Delhi, Chandigarh etc., hence patients from villages and small towns get the results by post; that takes one more week. By the time they decide to abort the foetus, it is over 18 weeks old. Abortion at such a late stage is quite harmful for the mother.

Popularity of the Test

The amniocentesis tests became popular in the last three years though earlier they were conducted in the government hospitals on an experimental basis. Now these tests are conducted for sex determination and thereafter extermination of female foetus through abortions, in private clinics and hospitals and government hospitals in many cities of India like Bombay, Delhi, Amritsar, Chandigarh, Baroda, Ahmedabad, Kanpur, Meerut etc. This perverse use of modern technology is encouraged and boosted by money-minded private practitioners who are out to make a woman, "a male-child-producing machine". As per the most conservative estimate made by a research team of Women's Centre, Bombay, based on their survey of six hospitals and clinics, in Bombay alone 10 women per day undergo test. This survey also revealed the hypocrisy of "non-violent", "vegetarian", "anti-abortion" management of the city's reputed hospital - Harkisandas Hospital, that conducts ante-natal sex-determination test. Their handout declares the test as "humane and beneficial". The hospital has out-patient facilities and there is such a great rush for the test that one has to book one month in advance. As the management does not support abortion, they recommend women to various other hospitals and clinics and ask them to bring back the female foetuses after abortion to them for further "RESEARCH". (Abraham & Sonal, 1983).

In other countries, this test is very expensive and is under strict governmental control, while in our country this test can be done at between Rs. 80 to Rs. 500. Hence not only upper class people, but even working class people can easily avail this facility. A survey of several slums in Bombay showed that many women had undergone the test and after knowing that the sex of foetus was female, had undergone abortion in the 18th or 19th week of pregnancy. Their argument was it is better to spend Rs. 80 or even Rs 800 now than give birth to a female baby and spend thousands of rupees for her marriage when she grows up.

Controversy Around Amniocentesis

Three years back a controversy around Amniocentesis started as a result of several investigative

reports published in popular magazines like *India Today, Eve's Weekly, Sunday* and other regional -language journals. One estimate that shocked everyone, right from planners and policy-makers to the academicians and activists was : Between 1978 and 1983, around 78000 female foetuses were aborted after sex determination test in our country. (TOI June, 1982).

The government and private practitioners involved in this lucrative trade, justify the sex determination test as measure for population control. Women have always been worst target for family planning policies. Harmful effects of pregnancy test, contraceptive pills, anti-pregnancy injections, camps for mass-sterilisation of women with their unhygenic atmosphere are always overlooked by the enthusiasts of family planning policy. Most of population control research is conducted on women without giving any consideration to the harm caused by the research to the women concerned. Advocates for population control will continue cashing in on socio-cultural values that treat the birth of a daughter in the family as a great calamity and perpetuate modern method of massacaring female foetuses on a massive scale.

India has a legacy of killing female children *(dudhapiti)* by putting opium on the mother's nipple or by putting the afterbirth over the child's face or by illtreating daughters. (Clark, 1983). These days also female members of the family get inferior treatment as far as food, medication and education is concerned (Research unit on Women's Studies, 1981). When they grow up, there is further harassment for dowry. "Then, is it not desirable that she dies rather than be illtreated?" ask many social scientists. In Dharma Kumar's (EPW, June, 1983) words : "Is it really better to be born and 'left to die' than to be killed as foetus? Does the birth of lakhs or even millions of unwanted girls improve the status of women?".

But what can be the long-term implications if such a trend continues ? Will it not aggravate the already disturbed sex-ratio ? There has been continuous decline in female/male sex-ratio between 1901 and 1971. Between 1971 and 1981 there was slight increase, but it still continues to be adverse for women.

Demographic Profile of India (in millions) 1901-1981

Year	Total Population	Male - Population	Female - Population	Total No. of women per 1000 men i e. sex ratio.
1901	238	121	117	972
1911	252	128	124	964
1921	251	128	123	955
1931	279	143	136	950
1941	319	164	155	945
1951	361	186	175	946
1961	439	226	213	941
1971	548	284	264	930
1981	684	353	331	935

Source : *Census Report,* 1981, Series 1, Paper 1.

Here too, economists have their reply ready i.e. law of demand and supply. If supply of women is reduce, their status will be enhanced. Scarcity of women will increase their value (Bardhan, 1982). According to this logic, women will not be burnt alive because of dowry problem as they will not be easily replaceable commodity. But here the economists forget the socio-cultural milieu in which women have to live. The society that treats a woman as a mere sex-object will not treat women in a more 'humane' way if they are scarce in supply. On the contrary there will be increased incidences of rape, abduction and forced polyandry. In U. P, Haryana, Rajasthan and Punjab among certain communities, sex-ratio is extremely adverse for women. There a wife is shared by 'a set of brothers' (or some times even by patrilateral parallel cousins) (Dube, 1983).

To think that it is better to kill female foetuses than giving birth to unwanted female children, is very fatalistic. By this logic it is better to kill the poor rather than let them suffer poverty and deprivation. How horrifying !

Another argument is that in cases where women have one or more daughters, they should be allowed to have amniocentesis done so that they can plan a 'balanced family' by having sons. Instead of going on producing female children in the hope of getting a male child, it is better for the family's and the country's welfare that they abort the female foetus and have small and balanced families with daughters and sons. This concept of 'balanced family' also has a sexist bias. Would a couple with one or more sons undergo amniocentesis to get rid of male foetus and have a daughter for balancing their family ? No, never !

This frenzy of having a 'balanced family' ! At what cost ? How many abortions (between 16 to 18 weeks) can a woman bear without jeopardising her health ?

Time and again it is stated that women themselves enthusiastically go for the test out of their free will. It is a question of women's own choice. But are these choices made in a social vaccum ? These women are socially conditioned to accept that unless they produce one or more male child they have no social worth. They can be harassed, taunted, even deserted by their husbands and in-laws if they fail to do so. Thus their 'choices' depend on

the fear of society. It is true that feminists all over the world have always demanded "the right of women to control their own bodies/fertility and choose whether or not to have child/children and have facilities for free, legal and safer abortions." While understanding these issues in the third world context we must see it in the background of the role of imperialism and racism that aims at the control of "coloured populations". Thus : "It is all too easy for population control advocates to heartily endorse women's rights at the same time diverting attention from the real causes of the population problem. Lack of food, economic security, clean drinking water and safe clinical facilities, have led to a situation where a woman has to have 6.2 children to have at least one surviving male child. These are the roots of the population problem, not merely the 'desire to have a male child'" (Chhachhi, and Sathyamala, 1983).

Meetings called by Women's Centre (Bombay) and various women's organisations in Delhi, discussed this problem at length and three positions emerged. 1. Total ban on amniocentesis tests; 2. Support to amniocentesis tests; and 3. Amniocentesis tests to be allowed under strict governmental control and only for detecting genetic abnormalities.

Most of the women's organisations feel that the 3rd position is most advantageous even if one accepts the fact that illegally, the tests will be conducted by unscrupulous people. To avoid this, women's organisations and other socially conscious groups will have to act as watch dogs.

The issue of amniocentesis once again shatters the myth of neutrality of science and technology. Hence, the necessity of linking science technology with socio-economic and cultural reality. Class, racist and sexist biases of the ruling elites have crossed all boundaries of human dignity and decency by making savage use of science. Even in China after 10 years of 'cultural revolution' and 'socialist thinking' sex determination test for female extermination are largely prevalent after the government's campaign for one-child-family began (Sunday, 1983). Chinese couples willy-nilly accept a system of one-child-family but the child has to be a male. This shows how adaptive the system of patriarchy, male supremacy is. It can establish and strengthen its roots in all kinds of social structures, pre-capitalist and even post-capitalists, if not challenged consistently.

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I am unable to understand the thought process behind the omission of my name. Does Dhruv Mankad assume that because I am married to Binayak Sen, my contribution to a joint production is subsistence (= negligible = zero) ? I would be grateful if he could clarify what lies behind this e.g. of marxist male chauvinism - for we can only begin to advance towards correct action from correct analysis.

May I congratulate you on an excellently produced first issue ?

Ilina Sen
Dalli Rajhara

DHRUV MANKAD REPLIES :

I tender my sincere apology to Ilina Sen for not mentioning her name in the editorial perspective while referring to a joint article by her and Binayak Sen. The error occurred due to the fact that before writing the perspective, I had not seen the actual article referred to above. I knew about the contents only from discussions with Binayak at Calcutta and later with Anant Phadke, Manisha Gupte Awasthi, Padma Prakash, Amar Jesani at Pune. Till I saw the article in print in SHR, I was under the honest impression that it was indeed written by Binayak only. This is what lies behind " this e.g. of Marxist Male chauvinism".

Despite this apology, I do wish to state that Ilina Sen's 'protest' is petty and unprincipled. She has thrown wild allegations 'of Marxist male chauvinism' on my part without first giving me a chance to explain. This kind of immature reasoning based on mere presumptions - that too, incorrect ones, would lead us neither to correct analysis nor to correct action but only to bickerings and quarrels.

I am restraining myself in my reply with the intention not to extend this issue any further. I hope in future, such errors are avoided and if and when they do occur the reactions thereto are more responsible.

WORKING EDITORS' REPLY : The omission was our fault rather than Dhruv's, because we were responsible for checking the final proofs and were of course aware of the joint authorship We regret the inadvertant slip

RURAL ENERGY SITUATION
Consequences for Women's Health

srilatha batliwala

This article examines the interrelationship between women's work, the growing scarcity of energy resources for survival, and its impact on women's health and nutrition. Women contribute 53 per cent of the human energy required for survival tasks. And yet they eat far less than they require. Women's calorific intake is about 100 calories (per woman per day) less than they expend whereas men show an 800-calorie intake surplus. The article raises some very important questions with regard to women's work, their food intake, access to health care and women's morbidity patterns and examines the energy - health - nutrition syndrone. This is based on a paper presented at the Conference on 'Women and Poverty' in Calcutta, 1983.

Dorland's Medical Dictionary defines the word syndrome as "a combination of symptoms result-from a single cause or so commonly occurring together as to constitute a distinct . . . . . entity". It is hard to find a more apt definition of energy, health and nutrition and their relationship to poverty.

It may be felt that poverty has an impact on the health and nutrition of all the poor, regardless of age and sex. Is there something unique about its impact on women ? Or inversely, do women bear an additional burden - in terms of their health, nutrition, or anything else - in a poverty situation ? This paper attempts to show that they do - and also why strategies for women's health and nutrition need to be emphasised within strategies for general development.

In the field of nutrition, most strategies have been aimed at increasing food intake indirectly or directly (Natarajan, 1974; and NIPCD, 1976: Batliwala, 1978). Women are targets of the latter programmes only during pregnancy and lactation. On the other hand, there has been little or no study of the possible effects of reducing energy expenditure - or to put it simply, reducing the overwhelming drudgery of the poor, and especially of poor women. This is not proposed as an alternative to raising food intake, but as an additional (and possibly critical) facet of improving women's nutrition and health. Such energy saving, as we shall see, is not only a nutritional asset but may also release a significant amount of women's time.

The greater work load on women has been observed for centuries and rather embarassedly reduced to a sheephish joke by men. But until recently, there was no detailed study of the relative work outputs of women and the nature of such work. In 1981, however, the Application of Science and Technology to Rural Areas (ASTRA) (a cell of the Indian Institute of Science, Bangalore) published the report of their three-year field study of rural energy consumption patterns (ASTRA, 1981). The study was conducted in rural Karnataka with a sample of six villages comprising 560 households and a population of 3,452.

One of the most significant results of ASTRA's study, was the role of human energy - and specifically women's energy - in the rural energy matrix. Table 1 summarises the findings :

Table 1 : Pattern of Village Energy Supply & Consumption

Source-wise contribution		Sector-wise consumption	
Source	Per cent	Activity	Per cent
Human	7.7	Agriculture	4.3
(Men)	(3.1)	Domestic	88.3
(Women)	(3.8)	Lighting	2.2
(Children)	(0.8)	Transport	0.5
Animal	2.7	Industry	4.7
Firewood	81.6		
Kerosene	2.1		
Electricity	0.6		
Other	5.3		

Source : ASTRA, 1981, "Rural Energy Consumption Patterns - A Field Study", Bangalore, Indian Institute of Science, p. 80.

If we exclude firewood, we find that human beings were the most significant energy contributors - even more than animals. Moreover, if we disaggregate human energy, men, women and children contribute 31%, 53% and 16% of human energy, respectively. The ASTRA study also showed that most human energy was spent not so much on economically productive activities but on survival tasks such as gathering firewood, fetching water, and cooking.

What is the role of women in these activities, and what is the magnitude of the burden on them

Table 2 :

Time and calorie expenditure on domestic and agricultural activities and their calorie cost (for man, woman and child)

Activity	I Hours/day M	W	C	II Calorie cost (cals/minute) M	W	C	III Calorie/day M	W	C
(A) Domestic									
(1) Gathering firewood	0.33	0.41	0.24				115	122	74
(a) Walking to source				5.2	4.4*	4.6*			
(b) Return trip with load				6.4	5.5*	5.7*			
(2) Fetching water	0.02	0.78	0.13				7	232	40
(a) Walking to source				5.2	4.4*	4.6*			
(b) Return trip with load				6.4	5.5*	5.7*			
(3) Cooking	0.02	2.28	0.18	2.5*	2.1*	2.2*	3	287	24
(4) Carrying food/walking to farm	1.00	1.14		5.2	4.4*	4.6*	312	301	—
(5) Livestock grazing	1.63	0.47	1.03	2.8	2.4*	2.5*	274	68	155
Sub-Total	—	—	—	—	—	—	711	1010	293
(B) Agricultural									
(1) Ploughing	0.18	—	—	5.5	4.7*	—			
(2) Irrigation	0.30	—	—	3.3	2.8*	—	59	—	—
(3) Transplanting	0.08	0.33	—	5.1*	4 3*	—	59	—	—
(4) Weeding	0.08	0.33	—	5.1*	4.3*	—	25	85	—
(5) Harvesting	0.18	0.19	—	5.3*	4.5* (Manual)		25	85	—
(6) Winnowing	. .	0.09	—				57	51	—
(7) Threshing	0.14)			5.3*	4.5*	—	—	24	—
(8) Manuring	0.13)	0.04	—	5.4	4.6*	—	45)		
(9) Nursery	0.07)			4.0*	3.4*	—	31)	35	—
(10) Harrowing	0.03	. .	—	3.5*	3.0*	—	15)		
(11) Transporting (by bullock cart)	0.05	. .	—	6.5*	5 5*	—	12	—	—
				2.0*	1.7*	—	6	—	—
Sub-Total	—	—	—	—	—	—	334	280	—
(C) Other Activites (Sweeping, cleaning, child care, personal care, play, sitting etc)	9.79	7.94	8.42	1.5* (average)	1.5*	1.7*	878	715	655
(D) Rest & Sleep (approx)	10.00	10.00	14.00	—	—	—	550	500	650
Total	—	—	—	—	—	—	2473	2505	1598

Col. I : Source : Compiled from data given in ASTRA, 1981 : *Rural Energy Consumption Patterns : A Field Study* Indian Institute of Science, Bangalore.

Col. II : *All estimated or approximated figures.

(i) N. L. Ramanathan and P. G. Nag, : *Energy Cost of Human Labour*, National Institute of Occupational Health, Ahmedabad.

(ii) R. Rajalakshmi, 1974 : *Applied Nutrition* (Second Edition), Oxford and IBH, New Delhi

compared to that on men? To determine this, we have to examine the hours per day spent on domestic and agricultural activities and translate these into calorie costs. Table 2 (col I) present the break-up of hours per day spent on agricultural and domestic activities by men and women.

The most significant aspect of Table 2 (col. I) is that while women average about 6 hours a day on survival-related and agricultural tasks, men average only 4 hours a day on the same. Also, the ASTRA study did not monitor **other** domestic work such as cleaning, sweeping, washing of clothes and utensils and child care, all of which are calorie-intensive and all of which are performed almost exclusively by women. On the other hand, most of the other (i. e., non-enumerated) tasks carried out by men are sedentary in nature - such as visiting the tea shop, trips to panchayat offices, talking with friends, and so on.

We have now to translate the activities of men and women into calorie costs and compare them with calorie intake. However, this is not as simple as it seems for once again **the neglect of women in social research or the ideological biases within existing information systems becomes a handicap.**

Ramanathan and Nag have reviewed virtually all calorie cost studies in the country for various activities in their paper *Energy Cost of Human Labour.* They found energy cost estimates for only 10 agricultural activities, compared to 70 industrial and military activities. Furtherrnore, there were no female equivalents for these agricultural tasks, as though women have not been participating in agriculture for several millenia !

The unkindest cut of all is when we find that the few women's energy costs (10, to be precise) which have been measured are clubbed under the category of 'sedentary people' and include such pleasant tasks as sewing, knitting, typewriting, piano-playing and singing. Where have 90% of India's women gone - the ones who work from morning to night at back-breaking domestic and economic tasks and also carry the burden of pregnancy and child care?

Under the circumstances one is forced to approximate the energy expenditure of women in the concerned tasks by using the fomula :

$$\frac{\text{energy cost/minute/adult male} \times \text{Basal Metabolic Rate female}}{\text{Basal Metabolic Rate male}}$$

(the BMR for moderate workers is used throughout the formula)

This gives us the estimates of energy cost per minute per activity for men and women presented in Table 2 (col II). Please note that all starred figures are estimates based on the above formula.

We are now ready to calculate the activity-wise energy output per day for man and woman, shown in Table 2 (col III).

A note of explanation in needed here : Agricultural activities are obviously seasonal but here they have been averaged over the whole year to obtain a daily figure, which is more appropriate for determining daily energy output and comparing it with calorie intake. Thus, during some months of the year, agricultural activities will account for much higher energy expenditure than shown in Table 2 (col. III)

We see that the calorie (energy) expenditure of women is higher than that of men. The difference appears more marginal than I suspect it really is. First of all, the 'other' activities of men, could not be clearly enumerated.

The shortage of off-season employment opportunities makes it doubtful that they spend a lot of energy in non-agricultural activities. Therefore one can postulate that during off-seasons the total calorie expenditure of men may be significantly lower than that of women.

Secondly, we see that most of the energy expenditure of women is on daily, life-supporting tasks which must be performed regardless of season and which are generally not shared by men - viz, cooking, fetching water, gathering firewood, washing, cleaning, and child care.

Thirdly, many of the above activities create a demand for human energy because of the scarcity of other energy resources. If cooking fuel and water were readily available close to the user and the efficiency of stoves improved, a saving of nearly 500 calories per day per woman could be effected. Is there a need to bring about such an energy saving at all ? If food intake more or less matches calorie output, there would appear to be no cause for concern. ASTRA's nutrition survey (unpublished) in the village Ungra (based on monitoring of food purchase and use over a two-month period) found that the average individual intake per day was around 2300 calories.

But this, like all other nutrition surveys in the country, assumes an equal distribution of food within the family - a highly questionable assumption.

The staple diet in this area is 'ragi' which is cooked to a dough and separated into balls for eating. When local women were questioned as to how they distribute the balls, their answers provided the following ratio : 2 balls for a man, 1.5 for a woman and 1 for a child. Obviously this would be a questionable basis for disaggregating the overall calorie consumption of the family - but it gives us a rough idea of intra-familial inequalities in food distribution. It also shows that food intake is determined not only by work output, but also by social and cultural factors which have to be studied, described and tackled.

Let us for a moment, return to the above ratio and assume it is valid. Applying it to the overall cereal consumption per day per family (4.24 kg) the relative food intake per man, woman and child would then be 3270 calories, 2410 calories and 1640 calories per day respectively. **This means an intake deficit of nearly 100 calories per day per woman, whereas a man has an intake surplus of nearly 800 calories.**

A deficit of 100 calories a day doesn't look serious until we link it to other facts : (i) The vast majority of the population have worm infestations, and these parasites can 'steal' as much as one-fourth of the total food intake. (ii) This intake level for women is a 'maintenance' level which makes no allowances for the additional 500-600 calories required during pregnancy and lactation - and Kamala Jaya Rao (1980) has shown that one-third adult Indian women are in that condition at any point in time, without the benefit of additional nutrition during these 'vulnerable' periods.

All of the nutrition programmes in the country are aimed at pregnant and lactating women - though how much of this extra nutrition actually reaches these women is a moot point (Natarajan, 1974). But what of the nutrition deprivation suffered by girls from infancy to pregnancy? And what of the women who have fulfilled their reproductive roles, but must continue to work for their family's survival without enough food to meet their needs?

Health hazards of cooking stoves and fuels

Beyond the nutrition factor there are other ways in which the village energy system affects women's health. Domestic fuel scarcity is only one part of the crisis women face. **Having obtained some form of fuel**, poor women are forced to cook on stoves which are both primitive and inefficient. The traditional chula, used in the vast majority of Indian homes, ranges from a crude pit or U-shaped pile of bricks to the more sophisticated fired clay or metal stove. The cooking efficiency of these stoves is dismally poor : between 3 and 10% (Geller, 1980). Since the fuel efficiency of a stove determines not only fuel consumption (and hence fuel-gathering time) but also the length of time spent in cooking, the traditional chula condemns women to spend at least 3 hours a day on cooking, and that too for most of their lives!

As if this were not a severe enough penalty, some recent studies have highlighted the extreme health hazards to women and girls where conventional bio-mass fuels like firewood, cowdung and crop wastes are used as cooking fuels (SNDT, 1983).

Dr. Kirk Smith, energy programme chief of the Resource Systems Institute of East-West Central Honolulu, conducted a study in rural Gujarat in association with the National Institute of Occupational Health (Ahmedabad) and the Jyoti Solar Energy Institute (Baroda). The study was conducted in 4 villages of the Kaira District. Smith's team found that traditional bio-mass fuels emit more Toxic Suspended Particulates, (TSP) benzo-a-pyrene, carbon monoxide and polycyclie organic pollutants than fossil fuels. Thanks to the crudity of stoves and the poor ventilation of the rural home, these fuel emissions produce a deadly disease trap for women and girls - for the study found that the women begin regular cooking at around 13 years of age (Indian Express, 1983).

Clinical studies by the Kirk Smith team found that women spending around 3 hours a day on cooking were exposed to 700 microgrammes of particulate matter per cubic metre, compared to the safety level of 75 microgrammes. The benzo-a-pyrene inhaled alone was equivalent to smoking 20 packets of cigarettes a day. (SNDT, 1983)

In another study conducted by the Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), 20 albino rats were exposed to cow dung smoke and soon developed chronic bronchitis, bronchiolitis and emphysema. The JIPMER Study suggested this as a possible cause of the high incidence of bronchinal disease among women and older girls in India (Indian Express 1983). In light of these facts, it is not surprising that respiratory disease is one of the major causes of death among women in India (SNDT, 1983).

One of the solutions developed to combat this problem is the 'smokeless' chula. The 'Nada' chula and 'Dholadhar' chula, among others, are some of the most sucessful designs. Designers and disseminators have reported not only fuel savings of 50% with these chulas, (IGDP, 1982) but the remarkable changes they have wrought in the lives of women and children; the fuel saving has released precious time which has been used in a variety of ways, including, as one woman put it, to "just lie down and rest" (Sarin, 1983).

Unfortunately, women's ill-health and undernutrition is not of equal concern to all. There is a growing school of thought which uses theories of biological adaptation (the 'homeostasis' theory) and clever statistical gymnastics to prove that there is in fact no such calorie gap (Sukhatme, 1981).

The doyen of this school is Prof. P.V. Sukhatme, a biostatistician with considerable clout who, a decade ago smashed the theory of the 'protein gap' in the diets of poor people. He demonstrated that the protein gap only occurs when there is a *calorie* gap - but when overall intake of calories is sufficient, the amount of protein is also adequate (Sukhatme, 1972). He was undoubtedly responsible for elbowing out the vested interests who would have liked to manufacture and market supplementary protein to people who had barely enough to eat.

Today his work has taken quite a different direction - a direction which has frightful implications for women. To grossly oversimplify his theory, he states that just as there is inter-individual variation in food intake, there is also an intra-individual variation. So at times we eat more, and then we eat less. Thus, ascribing some arbitrary norm such as 'recommended daily allowance' is meaningless, since both inter- and intra-individual food intakes will fall into a normal bell curve, with the majority of people in the centre and a few at either extreme, even though everyone is healthy (Sukhatme, 1981). From here, he goes on to state, that the only two indicators of malnutrition (either in the form of overnutrition or undernutrition) are : whether body weight remains basically constant (i. e., it is 'maintained'), and whether the normal level of activity (for which read 'work') is maintained. He believes that anyone who meets the above criteria cannot be termed malnourished.

Sukhatme also does not want us to be carried away by Western norms of how tall or heavy we should be. A thin, small person is neither stunted nor underwight - she/he has merely 'adapted' to efficiently use the little food to be had while continuing to labour away for survival.

Therefore, this 'calorie-gap' suffered by women and by many of the poor is of little consequences because they 'adapt' themselves and carry on. A comfortable theory indeed ! Women, in fact, are the stumbling block in Sukhatme's theory. Can women 'adapt' to calorie deficits of 500 or 600 calories during pregnancy and lactation ?

Even if they can, Sukhatme ignores the possibility that such adaptation over a lifetime may have disastrous consequences on health. Is this why more women die, and die earlier than men ? (HFA, 1981) Is this why maternal mortality is so high - 400/100,000 ? Is this why the average birth-weight of poor babies is as low as 2.5 kg (NIN, 1971), leading to so much child wastage ? In other words this may be the starting point of the vicious circle of maternal undernutrition, low birth-weight babies, high infant mortality and high fertility. In this context, health care services can play an important role in alleviating the health problems of women to some extent - but do they?

First of all, women's health has been confused with maternal health — once again on the assumption that women and maternity are one and the same thing. The only women-oriented programmes in the national health sector have been Maternal and Child Health Schemes and to some extent Family Planning. The health system has yet to waken to the fact that there are a large number of women in need of health care who are neither pregnant nor lactating.

Secondly, the outreach of health services is very poor with respect to women. Examination of in-and-out-patient records of medical institutions reveals that for every three men who avail of these facilities only one woman does so. This is by no means because women are healthier, but because in the Indian family, the importance given to a woman's ailments is considrably less than that given to a man's illness.

Thirdly, the very nature and structure of the health service system mitigates against its reaching women. Our health system is institution-based. Women have neither the time, mobility, child care facilities nor the leisure to travel long distances at great expense to seek out the services available in hospitals and health centres, often at the loss of a day's wage. A domiciliary system which reaches the doorstep would automatically benefit more women than today's set-up.

Finally in our culture, it is women who can best reach out to and care for other women. Yet in the present health services, male functionaries heavily outweigh the females. Although the number of women doctors has been steadily rising, few of these are working in the rural areas. It is the lone cadre of Auxiliary-Nurse-Midwives, poorly paid, poorly supervised and equipped, sexually harassed and overloaded with work, who are the sole guardians of women's health. Even the celebrated Community Health Worker Scheme, defeated our hopes when over 80% of those selected and trained turned out to be men.

Conclusions

The scarcity of other energy resources in a rural area creates a demand for human energy - particularly in survival-related tasks. When human energy is expended, women contribute the greatest share. But in comparison to this energy output, women get a lower share of food intake, and face a nutritional deficit. Added to the work burden, women also suffer further energy deprivation due to repeated pregnancies and breast feeding, high morbidity and intestinal infestations. Health care can alleviate this burden to some extent, but women apparently have less access to health care facilities due to the nature and structure of these services. These factors naturally affect all the poor, but women are more seriously affected because of their low status, and their social and economic roles.

I cannot presume to offer solutions—the complexity of the problem is mind-boggling. But I can and do raise a series of questions which must be answered if we are to even begin tackling the problem. The questions are :

(1) What is the actual pattern of women's work in different regions?

(2) What is the energy cost of the activities performed by men, women and children in different socio-economic groups - both urban and rural?

(3) What are the effects of human energy saving on nutrition status - with and without increasing food intake?

(4) Are the calorie intake norms or recommended daily allowances for women at various activity levels realistic?

(5) What is the actual food intake of women (at all ages and biological stages) and men ?

(6) How do women utilise the time released by the provision of alternative energy resources for survival tasks ?

(7) What is the actual extent and pattern of morbidity amongst women ?

(8) What is the outreach of health services to all women, and what is the level of utilisation of the former by the latter ?

In conclusion, and although I have said I can offer no solutions, the interrelationship between energy scarcity, women's work, nutrition and health suggests a three-pronged strategy :

Women's deprivation is occurring at three levels: the socio-cultural level, the environmental level and the service-programme level. The erosion of rigid patriarchal system has to occur, and all women's movements are aiming at this. Improving the availability of energy resources with priority for the activities performed by women (collecting fuel and water, cooking, and so on) is another facet of the strategy, and one where alternative technology can play an important part. Finally, there is an urgent need to restructure and expand the scope of existing programmes to reach out to women and draw them into the health care network.

How best all this can be achieved is a matter for further debate and discussion. But it is clear that the major thrust has to be on the political front, by mobilising women to analyse their situation and articulate their demands.

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HEALTH OF WOMEN IN THE 'HEALTH' INDUSTRY

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The authors of this article provide a new dimension to all those working for rational drug policy, against misuse of drugs, and so on Individuals and groups working in health have so far formulated their programmes with a concern for the consumers of drugs. But an important section, the producers of these drugs is left out. The authors' study of health problems of women workers in the drug industry shows that they are the first and worst sufferers. They stress the need for health groups to orient themselves towards producers of drugs, as workers need their expertise, and to find a strong and reliable ally in their fight against the controllers of drug industry. Health groups, trade unions and women's groups have many meeting points.

In the last two decades, some amount of thought, research and action has gone into the health hazards posed by the drug industry vis-a-vis the consumers of the products. Voluntary health groups and agencies are exposing the dangerous effects of drugs taken in quantities of 5 milligrams a day over years or also just once. However, hardly has any concern been directed against the effects of these drugs on the producers, the people working in the companies producing these drugs. The workers in their work process are exposed to the same drug, inhale the same drug, the drug enters their systems thorugh touch, through the mouth and through their respiration. They work for 9 hours a day, day after day, year after year, producing hormones, vasodilators, antibiotics etc.

If one has to look at the drug industry from the point of view of the health effects on the producers, one cannot be confined to a narrow conception of health as a lack of disease initiated by a drug. The conception of health effects has to be broadened considerably.

Drug Production and Worker's Health

The last ten years have seen a phenomenal increase in the production of Bombay pharmaceutical companies and in that of newer industrial centres. Many more liquid orals, tablets, vials, ampoules have been thrown in to the market. This is leading, not to increase in employment, but to the extraction of more work from less or the same number of workers. The impact of this process is increasingly being felt by the women on the packing lines. Behind the heavy advertising campaigns stand overworked packers lifting heavy ampoule-rings or heavy crates of bottles. This fantastic increase in production, from 22,000 ampoules per shift to 60,000 ampoules in 7 years or 8,000 to 50,000 per shift in 11 years, with very little increase in the number of women doing the work, is brought about in two ways. These two related methods produce two types of health hazards.

The simplest, age-old but out-dated method is to keep the process intact and increase the speed of the machine and hence of the entire process Such *speed-ups* on manually operated packing lines lead to fatigue, weakness, back-aches, aching arms, feet and shoulders.

Work on the packing line involves the fitting of bottles, sealing, labelling, optical checking, packing in boxes, inserting leaflets and case-packing. All these jobs may be manually done or some jobs are semi-automatic or automatic. The manual filling of bottles is extremely strenuous involving holding the bottles with hands, regulating the volume of the liquid by turning a tap or switch on and off, by pressing a foot pedal to start and stop the flow while holding the bottle under the nozzle. The strain is felt most on the arm and feet muscles.

In the manual spooling of adhesives, the operator mounts the rolls of plaster on the machine and pulls by hand till the plaster reaches the spool. "We have to stand on one foot and to pedal with the other to spool, and at the same time guide the plaster, and finally cut it when the required length has been reached. If the roll is tight, continuous pulling by hand is very strenuous. Continual cutting results in corns. Carrying rolls causes chest pains".

All these operations, when manually done cause extreme fatigue. "We have to lift the heavy rings of the capsule machine several times in the shift. It is very exhausting and dangerous as we have to stand on a stool to fit the heavy rings." By itself the single operation may not be very heavy, but repeated over hundreds of times in the 8 hours of shift, everyday, it becomes strenuous and causes tiredness.

Another major health hazard is the **deteriorating eyesight** of the women working on **optical checking**. Every vial, bottle has to be checked for the presence of foreign particles. Manual optical checking involves the packing up of one or more bottles or vials (depending on their size and weight), shaking

and viewing them against a strong light, sometimes against black and white backgrounds in succession. These have to be checked by the naked eye. Some women optical checkers told us, "Before we came to work here, most of us didn't have to wear spectacles. Now almost all of us have glasses. Sometimes we have to get our glasses renewed every 6 months."

In semi-automatic optical checking, "the bottles pass on a belt in front of the checker with a strong light shining through them. The speed of the belt is high and we cannot shift our eyes at all". "On our line, production increased from 8,000 to 50,000 per shift in 11 years due to the introduction of automatic filling and labelling machines. The optical checkers have increased from 2 to only 4".

Complaints of eye strain in optical checking were most widespread in companies where the women would have to check liquids for one day or more before moving on to another job. Rotation in jobs is an accepted practice in many of the larger pharmaceutical companies. Different types of rotation schemes exist. All the women who work in sections where jobs are rotated said they liked rotation, for two main reasons: (i) "There are hard jobs and easy jobs and the same people shouldn't always have to do the hard jobs". (ii) "It is boring to do the same job all the time".

Where the workers have complaints of fatigue or tedium and want rotation they could, through their unions, try to devise schemes with (a) rapid rotation, perhaps within lines to prevent strain and fatigue in certain operations, and (b) rotations on a longer cycle, such as three months perhaps between lines, to allow workers to become competent at a variety of operations.

The operations which were earlier either manual or semi-automatic and which have now been automated, almost always involve a reduction in the physical effort required to do the work. However, with automation, managements have tried to combine, two or three operations and a single operator has now to cope with 2 or more machines. Though the quantum of physical effort has been reduced, the strain of minding these machines increases manifold and results in mental strain and tedium

Where physical strenous functions have been automated the women often told us that the work had become less tiring. Increases in the level of automation have brought about this result by eliminating certain highly repetitive tasks such as holding bottles or vials under a nozzle, pressing a lever foot-pedal etc.

Any method which replaces the hazardous physically strenous and fatiguing work, by work that is lighter, safer and less unpleasant, and does it in far less time, is potentially a means of emancipation from long working hours, industrial fatigue, coercive work routines, health hazards and rigid sex stereotyping. Whether automation ever has this meaning, will depend on (i) the way in which it is introduced, which depends on (ii) how much control unions exercise over its introduction and use.

Experience of workers demonstrates that if the changes are made completely under management control, the chances are that workloads will increase, employment will decline, health hazards will increase and workers lose any sense of stability in their jobs. **It is only when those who actually work on the machines in the factories have some control over this process through their representatives and unions can the potentiailities of automation be realised.**

When production is increased in such proportions, not only is there an increase in workloads and fatigue for the women workers, but it also results in making the women workers less resistant to the effects of the drug they are producing. At the same time, the possibility of the hazards is multiplied due to the sheer increase in the amount of chemicals the workers come into contact, as in the case of optical checking, the eye-strain increases as the number of bottles and the speed with which they are to be checked increases. The increase in workloads or speedups is hazardous in itself and it also increases the intensity of the hazardous effects of the chemicals.

Health Costs of 'life saving' Drugs

Here we will go into the *case-study* of one such product-Isosorbide dinitrate. This is used as a coronary vasodilator for the treatment of angina pectoris patients. It is considered to be a life-saving drug and is sold under different brand names.

An approximately 1,500-word leaflet, besides the references of 22 'scientific' books of one of the companies producing the above drug has only this to say about the side-effects of the drug :

'Side-effects other than occassional typical vascular headaches are not common in effective dose.... Histological (microscopic) examination of the tissues from animals did not reveal any evidence

of toxic injury as a result of administration of the drug'. In fact, says the leaflet, 'the increased exercise tolerance produced by the drug usually results in a gradual lowering of psychic influences, and often gives the patient a new feeling of well-being.'

The leaflet refers only to two possible side-effects, 'headache during the early phases of therapy' which 'disappear within one week of continuous, uninterrupted therapy'. Secondly, 'mild gastrointestinal disturbances might occur rarely with larger doses. These could be prevented by taking the drug with food'. Lastly, the drug 'should be given with caution to patients having glaucoma (severe eye problem).

The women packers who work on these drugs, sorting and filling the tablets into bottles, however, have a different story to tell, "See how our faces are swollen up. This line always gives up problems. Our heads ache, — throbs all day and night. We feel giddy". "We don't feel like eating at all, no appetite, nausea and constant headaches.". . . . "Our monthly period is also affected. Very heavy flow and sometimes two periods in a month."

One of the women operators told us the case of one woman, who had had two healthy children and no family history of abnormal children, had a child who was completely deformed and died a couple of days after birth. This woman had worked on the Isosorbide dinitrate line all through her pregnancy. After this incident, however, the women decided that no pregnant woman should work on the line.

The department where this drug is packed is a small 121X81 room, where 8 workers work together at sorting and filling of the bottles. The sorting woman shakes the tablets in a scoop and the powder flies into the air everytime she does it, at least about 20 times in a minute. The room is air-conditioned with no natural ventilation and with a weak air-conditioner and exhaust. The masks given to the women are very thin, white pieces of cloth and quite ineffective. The women have to stop working every few hours in order to go to the dispensary to get aspirins or simply to breathe air free of the Isosorbide powder. The women cannot explain about this too often, as the management might insist on reducing their trips to the dispensary and push them for more production. So everything remains unofficial - the doses of aspirins, the swollen faces, the fits of dizziness and nausea.

Workers have no access to correct information

The standard scientific books about drugs state the following : "Of 42 patients with agina of efforts given sorbide nitrate, two-thirds suffered from side-effects which included headaches, malaise (feeling of illness), vertigo (dizziness), dyspepsia (indigestion), nausea, epistaxis (bleeding from nose)" (Martindelle.)

"In 14 patients, sorbide nitrate when given 5 milligrams sublingually, headaches occurred in 20% of the patients (Martindelle) "Reports of ankle oedema associated with Isosorbide therapy" (Martindelle).

"In some individuals, the blood accumulates in abdomen and lower limbs, venuous return of the blood to the heart is grossly reduced and the cardiac output and blood pressure fall precipitiously. The reduced supply of blood to the brain may cause fainting preceeded by nausea, shivering, cold sweats. The most likely side-effects of Nitrite therapy are methaemoglobinaemia (which results in breathlessness after exertion), serious hypotension (low blood pressure) and headaches". (Lewiss' Pharmacology.)

"Nitrites can affect ureteral and uterine smooth muscles . . " (Goodman Gilman).

This scientific information obviously tallies more with the experience of the women workers than with the leaflet put out by the management. But the day-to-day experience of the women has had up to this day not much of an effect with the management as there is very little easily available material which the women may use to back up their own genuine problems. To begin with, there is hardly any material or research done on the actual effects of the drug on the producers themselves. The little research that we could obtain with difficulty concerned only the consumers of the drug. And even this was not easily available. The leaflet that is given with the drug is obviously misleading and far from the truth. The labour institutes, chemical directories and chemical abstracts do not list these effects at all. It was only after a great deal of scanning through medical books that the above scant information could be compiled. How are workers who work for 9 hours at the factory and the women workers who have an additional shift at home, supposed to know what it is that they are working at every day ?

There is obviously a monopoly of information and a systematic campaign of misinformation by the management. The management has its own experts, expertise and can handle knowledge and information and use it for its own purpose. If the

workers have to have some control over their own situation, they have to have their own channels of expertise, information and initiate campaigns on that basis.

The hitherto most stable organisations of the workers have been trade unions. The trade unions, however, especially in a country like India, have not been stable and confident enough to take up issues like health of workers seriously and consistently. It is a fairly new dimension and more effort needs to go into such a systematic insistence on issues like health.

On the other hand voluntary health groups are a comparatively new phenomenon in this country. *These health groups have concerned themselves mainly with the consumsers of drugs and not the producers*. This may be so because as individuals interested in health issues, their day-to-day contact is with the consumers. In fact, unless there is such a conscious perspective, health issues of producers may not be addressed at all.

When, however, it comes to the question of the health issues of women workers, there is an additional dimension to the entire perspective. A special focus on the special effects on women workers at the level of research as well as that of campaign can be effected through the insistence of women's groups at the workplace.

These three types of organisations and groups have various meeting points and can come together over very concrete demands and campaigns, which in fact have been suggested by the workers themselves.

The immediate demands in this particular case may be :

1) Immediate research into how the drug enters the system of the workers and its effects. Dissemination of this research; (2) Easy availability of the currently available research; (3) Regular monitoring of the health of the workers; (4) Well-ventilated, larger work-rooms; (5) Proper exhausts; (6) Comfortable and effective masks; (7) Gloves; (8) Rotation in work schedules and new recruitment, so that no woman receives effective, harmful doses.

Much of the work process in the packing of Isosorbide e.g the sorting and filling of the tablets is manual. While sorting the tablets and while filling them in bottles by the scoop, the tablets have to be shaken. This give rise to the powder flying in the air, which the women breath in. Alternately this process is automated, the women will have to fill the hopper which should be covered with a lid to prevent the powder from getting into the air. By automation of this process, less powder will fly and secondly less women will be required to do the work, which in turn will result in a lengthier rotation cycle. If for e.g 54 women work on the product, in rotation, each batch consists of say, six women. There are nine batches with each batch working for three days a month on Isosorbide.

If the process is automated, only three women would be required per shift to work on the product. There could then be 18 batches, working for only one-and-a-half day a month on Isosorbide. The health problems of those working would be considerably reduced as they would be working for less days as well as the atmosphere in which they work would be less contaminated. The workers would, however, have to see to it that the production norma are not increased, which is a common demand of the management in cases of automation. For these demands to be worked out, it is necessary that women workers having similar problems have an opportunity to come together to share their experiences at work and evolve a common strategy. As of today, the women workers do not have a platform through which they can begin to do this. The formation of plant level women's committees and inter-factory women's committees could act as such a platform where women workers could share experiences and take up collective campaigns on common demands.

Campaigns could be initiated to plan and attempt the implementation of alternative production processes centred around the interests of the producers and consumers. And until this alternative is implemented, the above immediate steps have to be realised so that the ill-effects of working on a life-saving drug may be minimised for those who are producing it.

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THE STUDY OF WOMEN, FOOD AND HEALTH IN AFRICA

meredeth turshen

A study of women's health and nutrition must be rooted in a consideration of land tenure, food production, food distribution, processing, preperation of meals, preservation, storage and consumption viewed as a system. This article, a chapter in a recently published book (see Perspective) seeks to show how economic and political decisions (in this case, in Tanzania), affect women's health status and nutrition. Some of the fundamental causes of malnutrition and disease are, it is felt, beyond the control of African women, and some causes are rooted in the structure of the global economy as it operates at the level of the village economy. The author studies the situation of women's health using theory which is interdisciplinary and historical and offers a new, more comprehensive analytical framework.

The common approach is to look at women as housewives, usually within the confines of a single discipline. Medical anthropologists, for example, typically study the rituals surrounding marriage, birth and death; they catalogue taboos that influence health, such as prohibitions of certain foods during pregnancy and prescriptions of intercourse after childbirth. We are critical of this approach because it results in a static view of society, one that lacks reference to the historical past or political present, one that isolates the local economy and stereotypes women.

In our view the problems of the health and nutrition of women and their families cannot be understood or solved if they are analyzed at the level of the household economy alone. A multidisciplinary approach is needed, which combines the interests and insights of economics, sociology and political science. Looked at through these lenses, women emerge as farmers and marketers, wives and mothers, members of cooperatives and political activists. Women's contribution to the village economy is linked to national and even international economics, in this analysis. These linkages are made necessary by the fact that some of the fundamental causes of malnutrition and disease are beyond the control of African women; some causes are rooted in the structure of the global economy.

The research methodology and analytical framework of the multidisciplinary approach are described in part one. We begin by laying out schematically the relationships between food production and nutrition, between women and health. An explanation of the theoretical underpinnings of the argument follows. In part two the approach is applied to the current situation in Tanzania, where food shortages threaten to lower the nutritional status of families.

How to Study Women's Health

The study of women's health starts with their nutrition which, together with land tenure, food production, food distribution, processing, preparation of meals, preservation, storage and consumption, must be considered as a system. (Note : The United Nations Research Institute for Social Development is carrying out a research program called "Food Systems and Society" that uses this approach). This is because, in the rural areas of Africa, agricultural productivity — in its broadest sense, from plant seeds to the meal served — determines nutritional status. Unfortunately, it is rarely the case that food production and nutrition are conceived as a system; all too often agricultural planners ignore the problems of food consumption and nutrition, especially in countries where cash crops are grown for export (World Bank, 1981).

If the relationship between food production and nutrition is a conceptual one, that between woman and food production is an observed fact in Africa. In many countries the food system centers on women who perform most of the manual labor at all stages of the production process. (Note : The argument for considering food and nutrition as a system together with women's role in agriculture is made in a report prepared for the United Nations Protein Advisory Group [Eide et al., 1977]. As long ago as 1928 Baumann observed that the field work of subsistence farming in Africa is done exclusively or predominantly by women. Yet planners continue to ignore women in their role as farmers and they treat the food women grow for domestic consumption differently from export crops. Even when the commodity is the same—for example, rice and maize are both food crops consumed domestically and cash crops raised for export—and even when women work on both garden plots and cash plantations, their contribution is disregarded. Despite much rhetoric since International Women's Year about involving women in development, male planners persist in designing improvements in cash crop production for male farmers. Barbara Rogers (1979), in her study of development planning, castigates the policy makers of

bilateral and multilateral aid agencies for their discrimination against women.

A concommitant problem with agricultural inputs is that of the very land being farmed. Patterns of communal land tenure, dating back to the pre-colonial era, have changed in this century; under systems of private property now obtaining in many countries, women lose traditional land rights. Where there is land scarcity, as in the coffee farming areas of Mt. Kilimanjaro, male competition for land suitable for cash crops pushes women off their maize shambas and vegetable plots.

The relationship between nutrition and health is one of synergy : nutrition is the basis of good-health and the determinant of the outcome of most diseases. Malnutrition both increases susceptibility to infectious disease and influences the course and outcome of illness. (Note : Resistance to infection is determined by a number of host factors, but a significant variable is the adequacy of immune response; available evidence suggests that cellular immune response and antibody synthesis are two mechanisms by which malnutrition can depress host resistance [W.H.O., 1972]). The interaction of nutrition and infection varies with the type of disease. At one end of the spectrum are diseases not dependent on nutritional status, like tetanus of the newborn, smallpox, and most of the vector-borne infections, although nutrition does affect case fatality rates. At the other end are most of the communicable diseases of childhood, diarrheal diseases, and respiratory infections—the incidence and outcome of these are very much conditioned by nutritional status. It is this latter group of diseases that is most common in Africa and claims the most infant lives. Diarrheas and respiratory infections are not preventable by medical means, however, and it is in this context that the special role of women in health arises.

Women are the providers of informal health care : as wives and mothers they are often called upon to nurse the young and the old, the sick and the disabled. Even as the network of rural health services expands in some parts of Africa, women still undertake the work of primary prevention by preparing meals, drawing water, bathing children, washing clothes, clearing the compound of refuse, and gathering fuel to light fires on cold nights in the mountainous areas of the continent.

This traditional form of informal health care was subject to contradictory pulls in the colonial period. On the one hand, the need for it grew as new types of work gave rise to new health problems and as the public and private sectors of the colonial system failed to provide adequate welfare or social services (Turshen, 1977). The need was especially great in those subsistence areas to which male migrant laborers returned when old, ill or unemployed. On the other hand, women's informal nursing skills were undermined as health care was socialized (in the sense of being performed as a service outside the home) in government and missionary clinics and as traditional medical knowledge was devalued and replaced by western medicine. Demand for home care was rising at the same time as traditional medical knowledge, especially of herbal remedies, was declining

These, then, are the relationships between women, food and health. Our next task is to make explicit the theoretical underpinnings of the analysis. To build a complex argument such as this, it is necessary to draw upon theory that facilitates the process of relating information from several separate academic disciplines—in this instance, agricultural economics, medicine, public health, and women's studies; in other words, there is a need for theory that encompasses interdisciplinary studies. A second need is for historical method, because there is no adequate explanation of the current development dilemma in Africa without reference to African history. Colonial accounts of the last century are not useful substitutes for the combination of oral history and anthropological field work that gives Africans the central role in their own stories.

Third, one needs theory to make sense of contradictions, which seem to abound in descriptions of Africa. One narrow example from African women's history will serve as an illustration. A number of authors (Boserup, 1970; Robers, 1979) have made convincing, if damning, critiques of the education given African girls by Christian missionaries. The emphasis on home economics (interpreted as cooking and sewing), not only belittled the African woman's understanding of her familial environment, but also taught her to want European manufactured goods that were often inappropriate and beyond her means. Yet if one reads the biographies of today's African women leaders, it is interesting to note how many of them are graduates of such classes, or are the daughters of women trained in this way.

Finally, one needs theory to explain the social oppression of women, their subordinate political position, and their economic expolitation. To make

sense of the realities of women's lives in a sophisticated way requires theory that differentiates the nature of constraints on a woman like Jihan Sadat from the actual existence of a poor village woman living in rural Egypt.

To sum up, the theory employed is interdisciplinary, uses historical method, relies on dialectics to analyze contradictions, and combines feminist theory of women's subordination with Marxist theory of class conflict. Hypotheses based on this body of theory are best tested in participatory research. (Note : Sources of information on participatory research methodology are the International Council for Adult Education in Toronto and the United Nations Research Institute for Social development in Geneva). In participatory research, the subjects become the research workers by defining their own problems, gathering empirical data, experimenting with solutions, and using the results to refine the analysis of their problems. This technique is particularly important for women who are too often cast as passive recipients of development programs or, at best, as respondents in surveys. Participatory research empowers women in a way that traditional methods, including participant-observation, can never do. It also has the advantage of speeding up the process of returning research results to the people most directly concerned.

With these research tools it is possible to analyze the international situation in African countries and find out how women, food and health are linked to the economic, social and political system. Internal analysis is insufficient, however, since the national system is subject to international control. One form of international control is neocolonialism, which is continuing economic domination of a former colony by the metropolitan power. Many would say that Gabon is still controlled by France in this way. A more subtle form of control is exerted by international institutions like the World Bank and the International Monetary Fund which dictate the terms on which African nations can borrow money for development projects. Marxist theories of imperialism are useful in understanding international relations, including the role of financial institutions (Brewer, 1980).

Women's Health in Tanzania

There is so little information available on women in general and women's health in particular that it is easier to begin this discussion with a description of the present economic crisis in Tanzania and deduce its impact on women. In terms of levels of analysis, we will be moving from the national up to the international economy and then turning to the village and household economy. This process may be thought of as linking macroanalysis to microanalysis.

The nature of the present economic crisis in Tanzania is described in the following news report. "Tanzania's economic problems... have forced the suspension of development projects in the 1982-83 fiscal year. President Julius Nyerere said the country's small amount of foreign exchange earnings would instead be used to pay for spare parts and other essentials. Observers said that shortages had reduced Tanzania's small manufacturing sector to 30 percent of capacity, and that there were widespread shortages of such essentials as flour, sugar and cooking oil. Inflation is running between 40 and 60 percent annually. Although Nyerere had refused IMF demands to devalue the Tanzanian shilling, the currency was in fact devalued by 10 percent in March, 1982. The IMF had sought a 50 percent devaluation" (*Africa Report*, 1982b).

Why does the IMF seek a 50 percent devaluation of the Tanzanian shilling, and why does Nyerere refuse? Tanzania is unable to balance its international income (composed of export earnings and current borrowing) with its international expenses (imports and debt servicing.) There are three ways to deal with balance of payment deficits: (1) impose import restrictions or capital controls, (2) deflate the economy by reducing economic activity, or (3) devalue the currency (Block, 1977). The IMF recommends devaluation because it leaves the market open and unimpaired, and the capitalist firms that the IMF serves want to continue selling their manufactured goods to Tanzania unimpeded by import restrictions. The firms are not affected if it costs Tanzania twice as much to buy their products.

Nyerere opposes devaluation because it raises the cost of imports and reduces real wage levels. With dwindling reserves of foreign currency and unable to negotiate a loan from the IMF (with which Tanzania has been bickering for years over terms and conditions) he is forced to cut imports. The effect of the cut is to create a shortage of spare parts, which in turn reduces manufacturing to 30 percent of capacity. With machines turned off, men and women seeking employment in Tanzania's small industrial sector must be turned away, those who hold onto their jobs receive wages worth 10 percent less. A new system of financial incentives allows industry to knock an additional 10 to 20 percent off

the pay of 'idle'—that is, less productive—workers (Dimsdale, 1982).

What will be the impact on women workers? Women are concentrated in low paying jobs, in Tanzania as elsewhere; their incomes are already inadequate (Shields, 1980) . Urban women thrown out of work will spend more time cultivating their small shambos (the kitchen gardens found near all residences) and may turn to casual prostitution to supplement their incomes, according to a survery of women workers in Dar es Salaam (Bryceson, 1980).

Meanwhile, inflation is running between 40 and 60 percent a year. In North America and Europe, inflation rates of 10 percent are a cause for alarm and government intervention; the impact of rates that average 50 percent in Third World countries less able to absorb inflation is devastating. Since it falls to women in Africa to purchase the food and clothing they and their children need — and in the cities they must also buy fuel and water — inflation will lower their standard of living, including nutritional standards.

One cannot assume, however, that all essentials are there to be purchased at any price, since the article in *Africa Report* states that there are widespread shortages of flour, sugar and cooking oil. These commodities are essential to urban women. Inevitably a black market has appeared and there are reports of hoarding and corruption. According to, *New African* magazine, "Sugar at the controlled price cost Tshs 8.50 a kilo but during a serious shortage, prices can shoot up to Tshs 30 a kilo" (*New African* 1982a).

In the countryside there is a return to the subsistence economy; surpluses are being bartered rather than sold (Dimsdale, 1982). (Note : Subsistence today should not be imagined as a return to the romantic villages described in anthroplogical accounts of the colonial era. Too much change has occurred — in land tenure and cropping patterns, for example — for that past to be recaptured, if indeed it ever existed). If this means that women are now grinding their own grain, pressing oil seeds, and processing sugar cane, then their work load is increasing. One wonders which of their many other duties will be neglected and what will be the impact of increased energy expenditures on their own health.

To secure a large loan from the IMF, Tanzania has adopted a program designed to increase the coffee crop by 5 to 6 percent a year. (Note . Tanzania was unevenly developed in the colonial period, with cash crop areas receiving most of the colony's resources. The coffee areas are on the northeastern and northwestern borders where the climate is favorable. Population density is quite high in these regions). This program will deepen the crisis for women in rural and urban areas according to our analysis. To understand why we draw this conclusion, it is necessary to read reports on increased coffee production (*African Business* 1982) together with earlier notices of expected widespread food shortages and possible famine (*Africa Report, 1982a*). In 1981 Tanzanian officials predicted that food stocks would run out within a year. In January 1982, the Minister for Agriculture announced that Tanzania would need 300,000 tons of food aid. (Three months later Western nations offered 260,000 tons of emergency food aid) (*Africa Report* 1982a).

Food aid however, is not a long-term answer. Even the official agencies now admit its failure. *New African* (1982b) reported the findings of a confidential report by the European Court of Auditors, which severely criticizes the European Economic Community's food aid to Third World countries during the last decade. A few years ago such scandals were reported, not by official agencies, but by groups like the Institute for Food and Development Policy (Lappe and Collins, 1977) and individuals like Susan George (1976). Of course the donor countries are not yet ready to abandon food aid altogether; it remains a convenient way to dispose of agricultural surpluses "while profiting from the resultant political and economic influence " (*New African* 1982b).

The connection between famine and increased acerage under cash crops turns on insufficient food production. While the IMF is pushing for more land to be given over to a non-nutritive export crop, the World Bank reports that in Sub-Saharan Africa as a whole, food production per person declined in the 1970s. "Imports of food grains (wheat, rice and maize) soared — by 9 percent since the early 1906 — reinforcing food dependency" (World Bank, 1980; 3). To realize what increased coffee production means to rural women in Bukoba or Kilimanjaro where most coffee plantations are located, we must turn to the internal analysis of women, food and health at the microlevel of the household and village economy.

Studies that describe the relationsbip between women, nutrition and food production in northeastern Tanzania were reviewed by the authors of a report prepared for the United Nations Protein

Advisory Group (Eide et al., 1977). These authors conclude that although cash crop areas like Mt. Kilimanjaro are supposedly the prosperous regions of the country, infant mortality is exceptionally high there. (Note: This finding is not reflected in official statistics for Kilimanjaro Region; the discrepancy may be accounted for by the level of aggregation of government data). Infant deaths are more numerous on the mountain than on the poor maize-growing plains to the south. The authors relate this finding to what they term 'culture-specific factors' that help to determine women's position in the family (Eide, 1977 : III. 85).

Factors such as intrafamilial food distribution appear to be crucial when economic conditions are unfavorable, as they are now (*African Business*, 1982). Coffee growers receive an average price of Tshs 15 per kilo as compared with the 1981 world market price received by the Coffee Authority of Tanzania, which was Tshs 28 per kilo, and growers may have to wait as long as six months to receive payment. As a result, an estimated 30 percent of the crop is reportedly smuggled into Kenya, where the price received is six times the Tanzanian price (Dimsdale, 1982). The loss of foreign exchange to the Coffee Authority only aggravates Tanzania's crisis. In these circumstances, the tradition of differentiating between men and women's food and the custom of serving husbands large portions of meat result in nutrition problems for less privileged family members.

Prevailing inequalities in landholdings here are accentuated by coffee production. The wives of better-off farmers with more land and cattle are under less strain than women in low income groups. Wealth allows some women to ride to distant farm plots while poorer women walk. Wealthier women can hire workers to help harvest crops and to transport them, while poorer women may spend long periods away from home walking to their fields, working in them, and carrying heavy harvest loads uphill on the return journey. A little wealth also makes it easier to keep cattle and goats since cash buys lorry loads of grass, which has to be brought up from the plain to feed animals kept in stalls or tethered because there is no grazing land available on the mountain, nor is there space to grow fodder.

Cash crops are a source of income to men and in households where income is pooled — a practice by no means to be taken for granted in Africa (Shields, 1976)— women may profit and use the money to lighten their workload. But studies show that such women are a minority. For the majority of poor women coffee crops "on nearby land will force them to walk farther to grow maize on distant fields; they will have a heavier work load as food producers, less time for household tasks and a bigger struggle to provide the family with nutritious food" (Eide et al., 1977 : 11.87).

For solutions we must turn once more to the international level, not because Tanzania bears no responsibility for its internal affairs nor because there are no further improvements to be made in domestic policy, but because the ultimate determinants of solutions are external. Few countries have tried as hard as Tanzania to improve the living standards of their masses, but government plans have often been sabotaged by unfavorable international terms of trade. Yet the IMF and the world Bank do not suggest changes at the international level; indeed the degree to which they shift responsibility for economic crises to national governments is striking. The adjustments recommended by the IMF as conditions of loans are always national policy changes, which have significant social consequences. The lending policy of the IMF encourages 'loan dependency' in the same way it fosters food dependency and leads to what Cheryl Payer (1975) has called the 'debt trap.'

The World Bank's solutions, presented in the report on 'Accelerated Development in Sub-Saharan Africa," emphasizes production of cash crops for export (World Bank, 1980). The Bank claims that there is an extra-ordinary degree of similarity throughout the region in the nature of the policy problems that have arisen and in the national responses to them. (One wonders what role the IMF has played in its imposition of uniform conditions). Among shortcomings of existing policy cited by the Bank are a bias against exports and a bias against agriculture. In reading the Bank report, one experiences the sensation of deja vu; in the nineteenth century, imperialists rationalized their colonial policy with the doctrine of natural advantage. Once again the Bank seems to be advocating that African nations specialize in producing primary commodities for the nothern industrialized nations.

The countries of the Third World oppose that rationale and have submitted a program for change called "The New International Economic Order" (United Nations, 1974). It is not possible here to describe the program in detail; it may suffice to say that implementation of the program of action on trade and development of raw mateials and primary

commodities would offer Tanzania more options than that of devaluing its currency or curtailing its development programs. The amelioration of terms of trade would offer Tanzanian coffee farmers better returns on the crop they now produce, obviating the need to expand production at rates of 5 and 6 percent per annum. Improved terms of trade would also alter the economic circumstances of women and offer the possibility of better health and nutrition for themselves and their families. The New International Economic Order holds the promise of a future for Tanzania radically different from the grim one currently predicted.

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a) Awakening the Women : To understand the reality of the bhutali phenomenon in all its different dimensions. (In the minds of many woman there is a lurking doubt that the bhutali may be real. This comes to the fore especially in the minds of women affected by unfortunate events and they support their husbands in the hunt for the witch). This awakening is part of the wider struggle of the women for emancipation and equality. This awakening must also form part of the general awakening of the male population. (The men too have a tremendous fear of the witch and which is the reason for the vehemence with which they act to annhilate her). Since the bulk of the population is illiterate, the process of awakening will have to make extensive use of drama, song and discussion.

b) Improved Health is the cornerstone : Because if one goes through the earlier part of this paper one notices that the event that triggers the witch hunt, is in most cases 'unexplained' disease or death. The deterioration of the adivasi health system is a major area of concern when one looks at the bhutali problem. Any effort will have to be directed to attain three goals :

i) A re-evaluation and change of the adivasis understanding of health, disease, and health care. ii) Taking health to the grass-roots in the form of more radical health care systems and creative responses to the health problems iii) Developing a local integrated system of preventive health care.

c) The Enlightened Bhagat is the Key : As the central person in the traditional health care system of the adivasis, the bhagat plays a crucial role (whether positive or negative). Hence any action for integrated creative health care would necessarily need to include the 'enlightened bhagat' (Any attempt to substitute the present with a parallel system even if it provides a superior and more efficient system would be counter-productive). Those 'enlightened bhagats' would have to be involved in a process that is geared to : i) improving diagnostic skills. ii) identification of herbal remedies and their medicinal porperties, together with methods of cultivating and preserving various herbal plants. iii) Development of supplementary skills and medicine to complement those areas where the local systems and remedies are insufficient. iv) Development of preventive health care as a system in its own right with the bhagats.

d) Education to develop scientific attitude : A consistent programme to introduce a scientific temperament coupled with the struggle against superstition should run through the whole effort which would integrate the various parts as one integrated look at life and its different processes.

This short paper tries to put forward what we are thinking and hoping to put into effect. We need assistance and co-operation at every step. Your solidarity is as necessary as our efforts. We hope you will become part of this process of struggling for the liberation of the adivasi and the women in particular.

THE 'BHUTALI' PHENOMENON
Why Are Women Hunted Down As Witches ?

kashtakari sanghatana

The Kashtakari Sanghatna is a left democratic mass organisation of marginal farmers and agricultural workers of Thane District in Maharashtra. Even while launching numerous struggles around the problems of the adivasis, it seeks continually to build-up political consciousness in its membership.

Women have been the backbone of the organisation and have consistently remained in the forefront of the movement. However the conscious struggle for women's liberation has only recently become part of the organisation's efforts. Recently, in a women's meeting, a militant Sanghathana member, forced into the background by political repression, raised an issue of vital importance to the adivasi women. She expressed her fears of being suspected as a witch. Once a courageous fighter, now apprehensive of being hunted as a 'bhutali', (witch) her predicament threw into clear relief the contradiction of adivasi womankind - power and powerlessness - reducing them to being victims of cruel inhumanity.

Till today, various problems have forced the Sanghatna to take adhoc measures vis-a-vis the torture of women 'bhutalis'. The efforts of the activists have been reduced to a battle of wits to minimise the brutality. peoples science movement groups made efforts to expose the superstition. But the 'bhutali' remains mystified and entrenched in the adivasi mind and almost defies a rational solution.

The persecution of 'bhutali' reflects the deteriorating health status of the adivasi. The challenge to evolve a creative response to the situation confronts the organisation. This reponse while being innovative and revolutionary needs to be integral to the ethos and existence of the adivasis, their symbiotic relationship to the forest and their faltering steps into modern society. The search for the 'old yet new' is just beginning.

Every single year, with almost unfailing regularity adivasi women of Thane District, become unwilling victims of a bizarre ritual which ends, in many cases, with the whole village (men, women and children) crying in a frenzy "death to the witch". In a rapid sequence of events which allow no single member of the village community to remain unaffected or uninvolved, a group of women (or in some cases a single woman) is suspected of witchcraft and, with no warning whatsoever, forced to stand trial. Put in the dock by the village males (with the village women looking on), and sometimes even in absentia, the women are tried and summarily handed a foregone conclusion : the sentence of guilty. The guilty woman (women) is responsible for the many evils that may have befallen the village. She has to take on herself the blame for all the mishaps that may have happened. She is liable for punishment. The trial is swift and final. The accused stands in the dock, already adjudged guilty. She has neither the right of counsel (any one defending her is in turn an accomplice and immediately suspect) or defence, she is neither tried nor are her pleas recorded. She stands a mute spectator to her 'trial' and a witness to her own execution.

The whole village is prosecutor, judge and jury and finally the executioner. The guilty victim is then subjected to the brutal sentence. In most cases she (they) is stoned. Sometimes death comes as a merciful release. Every single member (for fear of being identified as an accomplice and meeting the same fate) takes part in the execution of the sentence. In most cases the event remains locked in the silence of the village. In very few cases does it reach the outer world.

What is witch-hunting ? Why and how does it occur ?

Disease and death form an integral part of the lives of the impoverished adivasis. In many instances poverty renders them helpless. Sometimes several deaths plague a single family, at other times an epidemic ravages the village. On some occasions mishaps befall a village, on other occasions disease affects livestock and cattle. The adivasi wonders at these inexplicable mysteries. He searches for the root cause of these maladies. And he finds 'a witch'. He is then impelled to rid the village of this pernicious cause and hunts down the witch with uncontrolled emotion.

Incidents of witch-hunting take place the year round. But they errupt with increased intensity during the monsoon. The reasons for this spurt in witch-hunting are not hard to find.

1) Increased Starvation, Widespread Malnutrition, Lowered Resistance : The begining of the monsoons finds many adivasi families with depleted food reserves. In many cases food stocks are the balance that remains after sowing. While food has already become scarce during the summer months, the adivasi can migrate in search of work and survival. With the onset of the monsoons, work in the brick kilns, salt pans, sand dredgers, stone quarries and earth transport, comes to a halt. The adivasis return to their villages, many of them empty handed. In the villages the availability of work is almost nil, besides many have to choose between working or cultivating their own land.

The ageold recourse of the adivasi in the face of starvation was to search for food in the jungle, wild roots, fruit, leaves and tubers. With these he was able to survive and had evolved elaborate methods of de-toxifying the poisonous roots and tubers, and make them edible. He celebrated this symbiotic reliance on the jungle with the feast of 'kohli' (eating of tender shoots from the jungle). Without eating kohli, the adivasi cannot begin transplantation, (indicative of his understanding that the bounty of the forest took priority to the fruit of his own labour). Today, rampant deforestation and extensive monoulture of commercial teak varieties has drastically reduced the availability of food from the jungle and increased starvation.

The groups most affected by the growing starvation are the older people and the children, who face increased malnutrition and lowered resistance to infection.

2) Inaccesibility of Health Care, Disrupted Communication, Shortage of Money : The rains reduce movement to a minimum. Most of the villages remain cut off. ST services are withdrawn as roads become slushy. The bullock carts, inexpensive means of transport are dismantled for the rains, cart tracks through the fields no longer exist. Taking a sick person to the hospital or PHC is possible only with makeshift stretchers. Added to this is "no money" not only to travel, but also to pay for medical services because even the PHC doctors will not treat a person, however serious, free. The lack of money becomes a compelling reason for not taking the sick person to the hospital or PHC for treatment.

3) Heavy Demands of Cultivation, Illness as Incapacitation : The adivasi methods of cultivation are backward and labour intensive. Every able bodied person is required for work. The youngest children do baby-sitting, the slightly older take care of the cattle, while the others assist in cultivation. Under such circumstances, a person is considered to be sick only when he is bed-ridden and incapacited. Till such a time (till the person falls seriously ill), everyone works and is not considered sick as long as the person can work. The breakdown of health is considered important only when it becomes an impediment to work.

Most adivasis consider going to the hospital as a last resort, when all other efforts have failed. They prefer the village bhagat because he works free, while the hospital or PHC costs money. Most patients are taken to the hospital when they are very serious. Taking a person to hospital/PHC is a disruption of the work-schedule as many are needed to take the person in a stretcher or remain in the hospital to cook for the patient. Hence the gravity of the illness is important to motivate people to take the patient to a medical facility.

4) Increased Waterborne Infection : The rains wash down the dirt from the hill slopes. Water rushes down the denuded hill sides. The thick forests and undergrowth assisted in the percolation and filtration of water. Now the streams are a muddy flow, carrying with them infection. The jungle serves as a toilet for the villagers and all of it reaches the streams. In addition, the adivasis relish the fish in the streams, which for many families is probably their major source of edible protein. The tiny fingerlings are eaten without removing the entrails. While the use of powdered tamarind leaves help to destroy any micro-organisms in the entrails, possibilities of infection still remain.

To recap, this maze of insecurity and uncertainty, the tribal places unquestioning reliance on the bhagat as his refuge, hoping through him to find a way out of a seemingly hopeless situation.

The bhagat is the tribal priest and medicine man rolled into one. He is a villager like the others, who has initiated himself into 'bhagatship'. He supports himself by his work on his lands, being a bhagat brings in no income, on the contrary it is often a drain on his own time and resources. He performs the few rituals that exist in the adivasi religion. His major function, which continues throughout the year, is as healer and medicine man.

The warli religion is based on spirit worship. Some elements of hinduism have crept in, but remain on the fringes of their worship and ritual. The koknas have absorbed much more of hindu beliefs, deities and tradition. The religion of the people centres around the appeasement of the spirits whose anger the people fear. Religion does not provide any morality or enforce an ethical code.

The adivasi medicine is from the jungle. Over years of experience, the bhagats have discovered a

variety of roots, herbs and medicinal plants that they dispense to the sick. The knowledge of these medicinal plants is handed down by word of mouth. However, once the bhagat has handed down the knowledge of the various remedies, he is supposed to stop dispensing these medicines as with the knowledge he has also handed down the power and efficacy of the medicine. The system of diagnosis centres round 'knots'. The body, according to their system, consists of different knots of muscle, nerve and blood vessel. Good health is a manifestation that equilibrium prevails, with each knot being in place and maintaining the desired tension. Illness occurs when the equilibrium is affected and the knots are either dislocated or lose their required tension. The treatment for illness is either in the form of branding or consumptiom of medicine, inhalation or even tying some herbs on the body.

The bhagat, then, is the immediate and in a sense ideal solution, for a variety of reasons : he is accessible; he is known; he is understandable; he is inexpensive; he is reliable; and, he is acceptable. Hence he forms an integral part of the adivasis healing system.

The treatment that the bhagat gives is a combination of spirit worship and offering to appease the angry spirit, and the use of herbal medicine combined at times with branding. The proportion of spirit worship and dispensing of herbal medicine varies widely with different bhagats. The efficacy of the bhagat however is progressively diminishing. The reasons for the decreases in his effectiveness are largely beyond his control.

a) Deforestation and Monoculture : Large tracts of mixed forests are being felled and replaced by monoculture of teak. A teak plantation supports no other forms of flora or fauna. With deforestation most of the traditionally used herbs are difficult to find. Many bhagats decrease the use of herbs because finding the herbs is a time consuming process. The numbers of herbal medicine-men is also on the decrease.

b) Lack on Continuity : As handing over knowledge of herbs means that the bhagat loses his power and efficacy, many bhagats die with their extensive knowledge acquired over the years. The tradition is not handed down.

c) Modern Diseases and Epidemics : with migration to the slums and shanty towns on the fringes of the cities, many adivasis return with infections which are totally new. The adivasi pharmacopia can no longer cope with the new diseases.

d) Lowered Health levels : The destruction of the forests, the elimination of mixed forests (with a variety of fruit and nut trees), the disappearance of game and the general growth of the population coupled with increased exploitation has had a severe effect on the diet of the adivasis, their intake of protein, vitamins and trace minerals resulting in a general lowering of the health of local adivasi population.

Caught in a vice of growing demands on his knowledge and powers of healing on the one hand, and a growing inability to deal with new conditions both in terms of diagnosis and therapy, a significant change is taking place in the system : a) there is a distinct shift in the bhagats modus operandi, moving more and more into spirit worship and appeasement, rather than dispensing herbal medicine. b) The tribal medical system is becoming progressively ineffective and with it grows the bhagats' failure.

To the mind, the new situation is inexplicable. They do not understand the changing circumstances that contribute to its deterioration. The bhagat cannot fail because he is in continual communication with the spirits. He can do no wrong. The blame has to be fixed elsewhere. And so, the witch becomes the cause of all the calamities and mishaps that befall a family or the village.

What are the events that culminate in this brutality?

The first event that triggers-off a witch hunt is either a prolonged illness, an inexplicable death, a series of deaths in a family, an epidemic that affects the inhabitants of a village or the livestock, widespread crop disease or failure, a number of mishaps or calamities that occur, or a combination of them.

It begins with a murmur, ('there is a witch') either emanating from the bhagat's mouth or from one of the affected individuals or groups. The murmur grows into a crescendo as the word spreads. The male members of the village start to take notice, the women of the village begin to fear.

A collection is made by the villagers to cover the costs of discovering the witch. A group of villagers is assigned the task and they go from bhagat to bhagat in search of an elusive prey.

The bhagat tries out a variety of rituals, (dann herne - read the message in grains of rice; diva herne - identify the witch in the light of a lamp), vati chalavne (using a cup which 'moves' and identifies the witch), he may conduct the sacrifice of a chicken or goat and try and read the indications spelt out in the entrails. The group of villagers may go to more than one bhagat to make certain of the identity of the witch. The bhagat who identifies the witch is not usually from the same village or locality. But through careful, intelligent questioning he is able to locate

either quarrelsome women, destitute women, women with poor family support, women who are generally socially weak, midwives and so on. The bhagat then proceeds to identify the witch and generally gives a vague description of the women on the basis of the descriptions unwittingly given by the women themselves. Once an identity is given, the group of men may go to another bhagat for a confirmation. Here too a subtle process of questions-and-answers is carried out and the identity of the witch given in similar though vague terms.

Once the process of identification is over, the next step of the village is to find the woman to fit the identity. Depending on the vagueness of the description given, the villagers (male) call for an identification parade. The parade can also consist of making all the women stand on a tava (frying pan) made red hot, on the assumption that the witches' feet will not burn. Sometimes this is by-passed and the witch is pointed out by one of the villagers and supported by the others. A third possibility is all the women who come close to the description are beaten-up till they confess to their nefarious activities and their crimes.

Once a witch or witches are identified, the whole village goes through the bizarre ritual of exorcising her of the evil spirit, or her association with the goddess Himai. Acting on the assumption that she feels no pain, the woman/women are beaten with clubs, stones or whatever else the villagers can lay their hands on. No one, whosoever they be (man, woman or child), whatsoever their relationship with the culprit be, wheresoever their sympathies may lie, whatever their beliefs may be, can abstain from this brutal activity, because an accusing finger will point in her/his direction. She/he will be accused of being accomplices of the witch.

The witch/witches are beaten till she/they fall senseless. Sometimes they survive. Survivors in most cases leave the village because the sword of an encore hangs continually on their heads. If a witch dies, she is summarily buried (not burnt) and the village maintains a stonewalled silence. If news of her death leaks out to the police, the villagers settle on who will take the onus of the 'murder' and assure him with money and legal assistance and the assurance that no one will testify against him at the trial.

After the ritualistic sacrifice is over, the catharsis complete, the village settles down with a sense of release that the cause of their anxiety has been eliminated. The women still shudder at the frightening events that has shattered their lives and a gnawing fear that they could be next in line.

What does the Bhutali phenomenon represent?

At the outset, we must make it clear that the efforts to understand the phenomenon are in no way complete and need further elaboration. We are putting down our reflections as they have occured to us, hoping to organise them further as we learn more about the living and thinking and feeling of the adivasi women and men.

a) The torture and death of the bhutali, provides a bizarre ritual which serves (provides) as catharsis | a ritualistic release of tension/aggression resentment of the tribal accumulated in his experience of the many painful events that continually plague his existence, the feelings of helplessness which accompanies his efforts to resolve them, the fears and insecurities that harass him all the while, and his forced acceptance of the unwanted unacceptable events of disease, death, mishaps and calamities. Through this catharsis, he finds release without having to confront the truth of the situation and thereby is reconciled once again to the situation.

b) The torture and death of the bhutali, thereby provides a rationalisation (explanation) of the failure of the bhagat to heal, and the relative inefficacy of the medical system. This rationalisation helps to diffuse any attempts to reassess the system of healing. The process is enhanced by the subtle shift from dispensing herbal medicine to sorcery and witchcraft that has taken place in the modus operandi of the bhagats.

c) The torture and death of the bhutali legitimises the man's innate suspicion of the 'viles-guile-deviousness' of women.

(The efforts of women to develop their own means of self-defence and countering the brute force of man have always been interpreted as scheming and guile). Hence in warli society every woman is a potential witch. No woman can ever claim to be free from this cruel possibility.

d) The torture and death of the bhutali provide a mechanism that compensates man's inability to resolve the problems of his existence (the here and now), by projecting (transferring) the root cause of all that is evil (painful) in his present outside of himself (beyond). This compensation helps him to reconcile himself to his here and now, without being forced by the nature of the events into seeking a rational explanation for them.

e) The torture and death of the bhutali serves as the 'ultimate' mechnism of control of women by men. It manifests the use of brute force (mens' forte) to crush the spirit of women and keep them in perpetual bondage. The accustion of being a bhutali is

continually resorted to by man to maintain the subjugation of women. (such references can be observed even in interactions between husband and wife). The torture and death of the bhutali which takes place in the presence of women remains a constant reminder that the duty of women is to conform and obey even when the order/command is a painful death.

f) The torture and death of Bhutali hence becomes the final (definitive) seal on the domination of women by men. The threat of the acrimonitious investigation and trial culminating in a violent brutal punishment hangs continually as a sword on the head of every woman, threatening to snap at the slightest provocation

g) The torture and death of the bhutali therefore is geared towards a conclusive suppression of any act of defiance on the part of women. The bhutali can be seen as the personification of defiance to the male order (organisation) of his world. She defies their efforts to reorganise their lives according to their plan and hence deserves the brutal treatment meted out to her.

h) The torture and death of the bhutali remains a constant warning to every woman that 'any act of insubordination to male domination will meet with a violent end'. This warning needs to be reinforced from time to time and hence periodic witch-hunting expeditions serve both a therapeutic as well as a preventive function in terms of the malaise of male-dominated society namely, the presence and thinking of women.

i) The torture and death of bhutali is related to the mystique that grows round 'blood - foetus - pregnancy' in the primitive mind. The mystique develops in the sense of awe and moves into the realm of fear. The male in his attempt to control the fear, seeks to control/crush/ suppress the root cause of the fear, the women. The domiant male also revolts against the realisation of the superior position of women which comes through their power to create and sustain life. His role in the creation of life remains minimal. His refusal to admit his subordinate place finds its expression in his act of domination.

j) The torture and death of bhutali is the logical culmination of the Pure-Impure Contradiction. This ritualistic impurity is extened into the interpretation of the female principle as dark, unruly, anarchic, devious, dangerous; while the man remains pure, rational, righteous. In the 'impurity' prejudice lie the roots of torture of womankind and their death to rid society of the 'evil principle'. The bhutali is a devotee of Himai, the goddess (the only female principle in the warli pantheon) of evil. The Principles of Good and Evil are embodied in man and woman.

k) The torture and death of the Bhutali (in many cases the suin/midwife) represents the ancient rivalry between the Bhagat and the Suin. The Midwife in her role of assisting in the birth of new life has knowledge of the mysteries of life which will always remain inaccessible to the bhagat. Her knowledge brings power and draws her inexorably into the power struggle with the Bhagat who triumphs in condemning her to death.

l) The torture and death of the bhutali is a manifestation of the Principle of Good (the Bhagat-male) finally eastablishing his supremacy in crushing the Principle of Evil (the Bhutali- woman). The bhagat as tradition goes can do no wrong nor can he harbour any evil towards anyone. All wrong and evil can be born therefore only in the womb of woman, and takes physical form in the body of a woman.

m) The torture and death of the bhutali remains a flagrant contradiction in the organisation of warli society. On the one hand the two sacraments (rites of passage/initiation) namely the zoli : (tying of the cradle) which initiates the new born child as a member of the tribe and is given a name and the lagin (marriage-the rite of initiation into the perpetuation of the tribe) by which the man and woman become adult members of the tribe are both performed by adult women. The male has no effective role to play in either of these two rites. Yet which being the High Priestess of the community, the woman must be continually kept in her rightful place. The Bhutali is the warning that the Mighty can be thrown down from their lofty thrones and made to mingle in the dust. This contradiction in warli society remains unquestioned.

n) In fact, the torture and the death of the Bhutali, as has been from time immemorial, becomes the rationalisation for the failure of man to organise his universe. The bhutali becomes the scapegoat that exonarates man of his failure in exercising his 'divinely appointed' responsibility to keep order in his world.

Where do we go from here ?

It is sometimes disconcerting to discover that the fear of the bhutali is so deeply rooted in the adivasi mind that the eradication of this horrendous annhilation of women suspected as being witches defies an easy solution. And yet there must be a way out. Our own struggle to find a way out of this malaise that strikes a death blow to the awakening of women throws up five possibilies. We share them below.

(Contd. on page 87)

Why don't you write for us ?

This periodical is a collective effort of many individuals active or interested in the field of health or interested in health issues. The chief aim of the journal is to provide a forum for exchange of ideas and for generating a debate on practical and theoretical issues in health from a **radical or marxist** perspective. We believe that only through such interaction can a coherent radical and marxist critique of health and health care be evolved.

Each issue of the journal will focus on one theme, but it will also carry (i) Discussions on articles published in earlier issues (ii) Commentaries, reports, shorter contributions outside the main theme.

Our forthcoming issues will focus on : Work and Health, Politics of Population Control, and Health and Imperialism.

If you wish to write on any of these issues do let us know immediately. We have to work three months ahead of the date of publication which means that the issue on Women and Health is already being worked on. A full length article should not exceed 6,000 words and the number of references in the article should not exceed 50. Unless otherwise stated author's names in the case of joint authorship will be printed in alphabetical order. We have retained the spellings and referencing style of reprint articles. You will appreciate that we have a broad editorial policy on the basis of which articles will be accepted.

We would also like to receive shorter articles, commentaries, views or reports. These need not be on the themes we have mentioned. These articles should not exceed 2,000 words. Please do write and tell us what you think of this issue.

All articles should be sent in duplicate. They should be nealty typed in double spacing, on one side of the sheet. This is necessary because we do not have office facilities here and the press requires all material to be typed. But if it is impossible for you to get the material typed, do not let it stop you from sending us your contributions **in a neat handwriting** on one side of the paper. Send us two copies of the article written in a legible handwriting with words and sentences liberally spaced on one side of the paper.

The best way to crystallise and clarify ideas is to put them down in writing. Here's your opportunity to interact through your writing and forge links with others who are working on issues of interest to you.

WORKING EDITORS

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Give Us an Answer !

All our life is on fire, all our prices rising,
Give us an answer, O rulers of the country !

A handful of American wheat, a kilo of milo mixed with chaff
Doesn't our country grow crops
Or do we have only mud-mixed grains ?

Give us an answer.....

We have forgotten the colour of milk
Coconuts and dried fruits have gone underground
Our children have only jaggery tea for nourishment

Sweet oil for cooking is the price of gold
Coconut oil for our hair is not to be had
Without rock oil for lamps we are familiar with darkness

We burn in the summer, we are drenched in the rains
We bear the rigor of winter without any clothes
Why don't we yet have any shelter ?

We toil night and day and sleep half-starved
While the parasites fill their bellies with butter
Why does the thief get food while the owner is cheated ?

There are pastures for the cattle of the rich
For forest development land is preserved
Why is there no land to support living people ?

Tall buildings rise before our eyes
The roads cannot contain these motorcycles and cars
On whose labor has such development been built ?

We filled the jails for independence
We hurled bombs into the cars of the white men
Did we do it to fatten the sacred cow ?

When we ask for a rise in wages, for work for the unemployed
Why are we met with jail, beatings and bullets ?

Now you have taken a new disguise
And appear in the colours of socialism
But we no longer want for today, promises of tomorrow !

Now we will stand on our own feet
We will throw caste and religious differences to the winds
We call for the sisterhood and brotherhood of all toilers !

We vow today to fight with our lives
We will bury capitalism in the grave
And sound the drums of our state !

Bhaskar Jadhav, 1971
(Original in Marathi)

Vol. 1 No. 3
WORK & HEALTH

SOCIALIST HEALTH REVIEW

POLITICS OF HEALTH AND SAFETY

ILLNESS & ACCIDENT REPORTING IN INDUSTRY

HAZARDS OF AGRICULTURAL WORK

socialist health review

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We regret that we had to withold Ray H. Elling's article on 'Industrialization and Occupational Health in Underdeveloped Countries' due to lack of space.

The views expressed in the signed articles do not necessarily reflect the views of the editors.

ASSAULT AT THE WORKPLACE

Most kinds of work can produce stress and prove to be hazardous. In their efforts to survive and thrive, early humans had to struggle with the vagaries of nature, which, on many occasions, must have proved fatally hazardous to some of them. These hazards, however, would probably not have been perceived as 'work hazards' but as a part of living. Obviously at this stage, there was a difference between 'work' and 'life'. With technological progress, however, survival gradually became less of a constant risk, and human beings settled down to the business of production, the basic means by which they existed and propagated themselves. But the technological progress associated with production had its own built-in problems, which became more apparent after the Industrial Revolution began.

Sickness and absenteeism are two words which highlight the bourgeois perceptions of health. A worker is considered to be 'healthy' when he is 'fit enough to work' and 'sick' when he is unable to 'work'. Under capitalism, therefore, health becomes equated to the ability to produce goods, a concept which dehumanises the worker and reduces him to being just a form of energy for the production process. Contrast this perception of health to that of the World Health Organisation which defines health as a state of complete physical, mental and social well-being and not merely an absence of disease and infirmity.

Wherever a new technology has been introduced the effects of the impact of this technology on ecology and human health have been recognised only many years later. The interval between introduction of this technology and recognition of its effects has, in many cases been highly detrimental to both man and his environment. This situation is likely to continue as long as vested interests exist to promote dangerous technologies in place where general awareness about the dangers of these technologies is limited.

With the increasing complexity of industrial processes, more and more hazards have begun to be recognised. The brunt of these hazards fall primarily on the working class, the actual producers of goods. When this class is looked upon merely as a tool in the production process, it is easy to understand why neglect of safety precautions occurs, particularly in countries where surplus work-force exists. It is revealing to examine in this context, two examples of safety standards set by different countries. In the industrially advanced capitalist countries, safety standards are higher and better implemented than in the less advanced capitalist countries. However it is in the socialist countries, whether industrially advanced or otherwise, that safety standards are highest. This is presumably due to the latter's commitment to preventive health care. It must be noted that a physically safe working environment is one of several factors which contribute to achieving work-satisfaction. Other factors include a harmonious 'organisation of work', control over the production process and channels of communication for workers to express their feelings about various aspects of their lives.

Let us take a look at the economics of workplace neglect. For the industrialist, ignoring the provision of a safe working environment means less economic inputs into his industry for the same production output. This saving therefore becomes, another addition to the net profit. A similar situation holds true for environmental neglect. Good housekeeping and a clean environment means more investments something which an industrialist would rather avoid if he can get away with it.

An important issue currently being debated is the question of why two different safety standards should exist for worker and public exposure to hazardous materials. Proponents of the double standards (which exists today) have used four types of arguments as justification for the status quo. These arguments have been questioned by a group from the Center for Technology, Environment and Development at Clark University, U.S.A. *(Science Today,* April 1982). I am briefly presenting the debate as it examines a number of relevant topics in work and health.

1. Proponents of the double standard argue that workers must be involved in production even if it is hazardous because it is for the larger benefit of society. Any attempt to reduce the workers' risk will

result in higher costs for the product, reduced employment opportunities, etc. This is an argument which tries to balance the wo kers' interest against larger social interests. Opponents of this social utility theory contend that there is no social justice in this view and that the hazardous exposure is being accepted with only very limited knowledge of the short-term effect of these hazards. What will the long term effects be ? And are we justified in exposing future communities to these hazards ?

2. The next argument uses the premise that certain groups of workers are better able or more specialised to face risks that others like children, pregnant women or the elderly cannot. Though on the fact of it this argument looks plausible, the face is that distinctions in workforce are not always clear cut, particulary in developing countries which have child-labour etc.

3. Compensation has been given by employers and even eagerly demanded and accepted by workers exposed to hazardous operations. This has been in the form of higher wages for riskier jobs as well as compensation for damage to health. Very often workers do not know and are not informed that a particular job is risky. This is particularly true of the chemical and dust industries. Even if we accept the principle of compensation, the fact is that the system of compensation is highly inadequate. How many asbestos workers know that they (and their families) stand a chance of contracting cancer as a result of exposure to asbestos fibres ? The majority of accidents at work and occupational illness go unreported, so in these cases the question of compensation does not arise.

More importantly one must look at the question of compensation from the viewpoint of social justice. Can a noise-induced hearing loss really be compensated ? How does one quantify the compensation for a chemically induced cancer. The problem with this kind of compensation is that it may legitimise the risks imposed on workers. A similar type of legitimisation of protection of workers is used by employers who give the milk-and-vitamin tablets formula as a sop to workers who are exposed to toxic substances.

4. Lastly, consent by workers to accept risks at their jobs is used as a justification for the double standards of exposure for workers and public. As a corollary to this argument, it is also argued that the public is unable to give consent, therefore their exposure must be lower than that of the workers. A closer examination of this argument shows that truely informed consent cannot really be given by workers. No job-aspirant is ever given a neutral assessment of the hazards of his job by his employer. More significantly for a worker, the decision to take up a particular job is based largely on economic necessity, job security and upward mobility, etc.

The feminist movement has given us new insights into women's work both in and out of the home. For long it had not been realised that family and household work done by the women could be viewed as an essential prop for the man working outside and could therefore be quantified in economic terms. Studies are now underway in India to formulate methods of establishing money values for women's work.

Mental stress from work can be brought on by disruptive work patterns which alienate the worker from his work. Productivity deals, work automations physical discomforts and fragmentation of work, contribute to the workers lack of control over the pace of production and conditions of work and can lead to severe psycho-social problems. These problems are faced even by the socialist societies of today and must therefore be closely examined and tackled.

It is heartening to note that a number of independent left groups are actively taking up issues of health and safety at work and related problems. One must note that work of this nature cannot be done in isolation only by trade unions or scientists but must be done on an integrated basis with the working class, environmentalists, members of the lay public, occupation health experts, etc. to be really effective. At first glance, there may appear to be a contradiction between controlling environmental pollution and the interests of the workers (who stand the risk of losing their jobs if polluting industries are hut down). However, it is imperative to note that here is a common interest between environmentalists and workers who must exert a concerted effort to force industries to clean up their environments both within and without the factory. Even though India is the eighth largest industrialised nation in the world, it is regrettable that hardly any work has been done in our country on work-related problems. Studies done in the US have estimated that 5 per cent of all illnesses are related to occupation. The figure for India cannot be much less and in all probability is greater considering the co-existing problems of poverty and undernutrition, a surplus work-force and almost no provision of safety measures particularly for workers in the unorganised sector.

The world economic order has had much to do with the causation of occupational ill-health. Multinationals have relocated dangerous technologies, e.g. asbestos from their own countries to other poorer nations, particularly, where there is ignorance about these technologies and there is no significant labour movement. There is a pressing need for a global information system which informs trade unions about new data on health risks, and about various news being debated on work-related problems. Neither in the curriculum of medical colleges nor in actual medical practice is there an emphasis on the detection of occupationally caused illness. Even the ESI medical scheme which deals only with workers has not instituted any major effort in occupational health.

The author wishes to thank members of the editorial collective for their comments and suggestions in preparing the editorial perspective.

Ramana Dhara



The lack of concern among workers and their unions, until recently, regarding health and safety at the work-place, the apathy and corruption of the State apparatus. The insupportable and manipulative attitude of the capitalist and managerial class and the acquiescence of the scientific and medical intellegentsia with the ruling class forms the major focus of discussion in the present issue.

Working classes, for an intolerably long period, have now been at the recieving end of the harmful effects of industrial production. that has not only alienated them from the product of their labour but also has abused and assaulted their faculties of body and mind reducing them to objects in the process of production. Health issues related to the workplace environment do not find a priority in the agenda of workers' struggles for their humane rights as participants in the productive workforce, especially in underdeveloped capitalist countries, because their day-to-day survival is still at stake.

Anurag Mehra and Sandeep Agarwal in the *Politics of Health and Safety* discuss this unequal contract between labour and capital and show how the capitalist class has successfully established an ideological framework that individualises the problem of health and safety at the workplace, therefore preventing its graduation into a social issue that could frustrate the profit-maximisation efforts of the capitalist by the issue becoming a central focus of the workers' movement.

The reporting system for occupational diseases and accidents and relevant legislation in India has been reviewed in the article, *Illness and Accident Reporting* by Jean D'cunha, Loy Rego, Mihir Desai and Vijay Kanhere of the Health and Safety Unit " Bombay. It is pointed out that, inspite of the gross inadequacies in the reporting system, the accidents reported in India are still considerably higher than most highly industrialised countries. As for occupational diseases the reporting is so small that it is negligible, even when studies by various public institutions like ICMR and CLI clearly indicate a high prevalence of diseases like silicosis, byssinosis, pneumoconiosis and asbestosis among others. The various legislations pertaining to work and health have been examined and it is shown how these supposedly pro-worker legislations are openly flouted by the factory owners in collusion with the corrupt protectors and implemantors of the law.

It is not only in traditional and modern industry that workers are exposed to health hazards. Agricultural workers too, encountrer illness-causing health situations which are peculiar to their work. The People's Health Group, Patiala describe in this article, the various hazards of agricultural work. They point out that these hazards are not so much a consequence of the introduction of new technology, as they are of the prevalent exploitative relations of production.

A. D' Mello reviews the book which has been much quoted by many of our authors in this issue- *Death on the Job* by Daniel Bergman. Although it was published six years ago, the narrative, documentation and analyses of occupational health and safety struggles in the US about work-related health issues of relevance to the growing awareness among activists and health workers.

We introduce a new 'column' *The Printed Word* which with your help can be a regular feature. On these pages, we aim to give readers a glimpse of the health scene as reported in the press. Please help us to keep track of what the dailies (especially the regional dailies) view as news, in the world of health and medicine.

Ramana Dhara
Jana Clinic
Kushaiguda
Secunderabad

FORTHCOMING ISSUES

March 1985, Vol I no. 4 : Politics of Population Control
June 1985, Vol II No. 1 : Health and Imperialism
Sept. 1985, Vol II No. 2 : People in Health Care
Dec. 1985, Vol II No. 3 : Systems of Medicine

The Printed Word

newsclippings in health and medicine, january – june 1984

The Health Status

Free Press Journal, 9 Ja : Monkey fever claims 18 lives in Malnad, Karnataka. A cure for the epidemic which has been taking a substantial toll every year since 1952 still eludes the medical profession.

Times of India, 15 January : Nearly all 93 employees of the state pencil units in Mandsur district have been found to be suffering from silicosis.

The Daily, : 87 out of 150 employees of the Golden Chemicals Ltd at Dahisar, one of the largest manufacturers of bichromates, basic chromium sulphates and chromium derivatives in Bombay, are found to have developed perforations in the nasal septum, an ailment induced by inhalation of chromium salts.

The Daily, 15 Feb. : In a span of 3 years, 16 workers of the Asbestos Packing and Manufacturing company in Bombay have lost their lives either because of asbestosis or TB, cancer, and heart ailments caused by inhalation of asbestosis dust. A recent check-up by the ESIS doctors revealed that 40 out of 240 workers suffered from asbestosis with lung function disability ranging from 10 to 75 per cent. The medical factory inspector has not taken any action in the last 20 years.

The Telegraph, 24 Feb. : Mystery disease in Arunachala Pradesh kills 20 in seven days.

The Statesman, 11 Mar. : Over 6,000 cases of malaria were recorded in1983 at one centre alone in Calcutta and the total number will not be less than 15,000.

Indian Express, 23 Mar : According to a study conducted by the National Institute of Nutrition, some 600 persons out of 2000 people of 28 villages of Prakasam, Nalgonda and Guntur district of Andhra Pradesh have been crippled for life by a disease named Genu Valgum which results in bow legs. Scientists have linked this to environmental changes following the construction of massive dam at Nagarjunasagar, which raised the subsoil water, increasing its alkalinity, leading to a concentration of trace elements like molybdenum in food grains grown in the soil. These molybdenum-rich foods displace copper in the body leading to the crippling bone diseases.

The Statesman, 2 Apr. : Dysentery toll rises to 628 in West Bengal. The number of people attacked is 12, 281, the worst affected areas being Jalpaiguri, Cooch Behar and Murshidabad.

The Statesman, 18 Apr. : According to an Oxfam study, the strange physical disorder (the Handigodu syndrome) noticed in some villages of the Shimoga district in Karnataka is traceable to the consumption of fish contaminated by residues of 'endin', a parthion chemical used in paddy fields.

Free Press Journal, 24 Apr. : The Gujarat government has decided to close down the 2000-bed civil hospital in Ahmedabad, the largest in Asia. The killer jaundice has claimed 300 lives including that of 30 doctors.

Hindustan Times, 28 Apr. : More than 5, 500 cases of malaria were reported in Delhi since January.

The Statesman, 4 May : Death toll rises to 1,244 in West Bengal. Total number of people stricken rose to 32,409.

Free Press Journal, 10 May : A recent study conducted by the Institute of Genetics and Hospital for Genetic Disease Hyderabad has found that workers in rubber, pharmaceuticals and asbestos factories reveal an increase in chromosomal aberrations like gaps and breaks and chromosomal abnormalitles due to mutagenesis caused by the pollutants.

The Statesman, 10 May : Dysentery toll in West Bengal now 1,592.

The Statesman, 19 May : Dysentery toll in West Bengal now 1,875. Total number of cases is now 61,762.

Hindu, 20 May : Gujarat hepatitis toll now 531.

Indian Express, 27 May : Dysentery which claimed 2,700 lives in West Bengal, Assam, Tripura, Orissa, Bihar, UP, Himachal Pradesh, and Rajasthan continues to spread claiming 1,987 lives in West Bengal alone.

Health Policy and the Health System

Deccan Herald, 2 Jan. : An integrated health and family

planning programme is to be launched in Kerala and Karnataka with a credit of $ 70 million from the International Development Association (IDA) the World Bank affiliates for concessionary lending. The programme which includes the setting up of PHCs with a staff each of three doctors covering a 'block' of about 80,000 to 100,000 will benefit 20 million people in Karnataka and 4 million in Kerala. The government of India and the state governments of Karnataka and Kerala will provide $ 53.8 million for the project which is to cost 123.5 million dollars.

Free Press Journal, 30 Jan. A mysterious loss of eyes from a corpse kept in the cold room and awaiting postmortem at the Irwin hospital and medical college in Jamnagar has been reported.

The Daily, 13 Jan. The Maharashtra Health minister Lalitha Rao has agreed to a proposal to set up a central maintenance department of the health service to be set up for the speedy repair of medical equipment.

Deccan Herald, 2 Feb. According to a study conducted by the Trained Nurses Association of India, in most hospitals one nurse looks after as many as 50 patients and the nurse : doctor ratio is 1:3.

Free Press Journal, 18Feb. : India, the world's 'largest home of medical manpower' has lost an investment of 144 million dollars in training 15,000 physicians at present working abroad, according to a WHO study.

The Daily, 19 Feb. : The anti-corruption bureau has registered criminal cases against seven Bombay doctors who are panel men of the ESIS, for cheating the scheme of more than Rs. 4 lakhs.

The Daily, 21 Feb. : 2,000 blood transfusion bottles costing Rs. 50,000 have vanished without a trace from the Lokmanya Tilak Municipal hospital in Bombay.

Free Press Journal, 14 Mar. : A Bill proposing the enforcement of state government control over medical centres run by various charitable trusts was introduced in the Maharashtra Legislative Assembly. It calls for the appointment of not more than three nominees on the governing bodies of the trusts for supervising the working of their medical centres.

Financial Express, 2 Apr. : (*Editorial*) The five-point strategy of the union health ministry to discourage the migration of doctors cannot be faulted. The earlier ban on medical graduates going abroad for courses already available here has helped to stem the drain. The latest proposal is to ban even the sponsorship for employment abroad of certain categories of doctors whose services are required within the country.

Hindustan Times, 25 Apr. : Soshit, a legal aid society has moved a petition in the Supreme Court asking the Delhi administration to explain why it should not be directed to take care of the large number of patients dying in the Jayaprakash Narayan hospital in Delhi while awaiting treatment. The society alleges that patients from neighbouring states are allowed to die because their bodies constitute a valuable 'commodity' for the morgue.

The Statesman : The West Bengal health department has requested the Left front to take a decision on the continuation of the Community Health Service Scheme in view of the increasing availability of doctors to serve in rural hospitals. The scheme, under which a 3-year medical training is given was introduced at centres a few years ago, when graduate doctors used to refuse rural postings.

The Hindu, 20 Mar. . The government of Tamil Nadu plans to popularise the comprehensive health check up scheme introduced in 1978. Anyone can have a comprehensive check-up in government hospitals for Rs. 10 including blood tests, urine analysis, ECG, X-rays and also tests to detect sugar, cholesterol, albumen, and diseases like VD. The results are usually available the same day and a health index card is given.

Times of India, 23 Mar. : An anaesthetist at the RCF Hospital in Bombay has been held liable for causing the death of a patient due to negligence. The jury ruled in unanimous verdict, upheld by the additional coroner that the anaesthetist had overlooked necessary precautions during the operation.

Medical technlogy and developments in medical practice

Deccan Herald, 5 Jan. : Screening units in the state hospitals in Karnataka are being phased out with a view to preventing radiation hazard to patients. They are being replaced by safer devices called the Odelca cameras, 6 of which will be imported this year. Six others have already been purchased.

Frees Press Journal, 10 Jan. : 73 machines and instruments are lying idle in different municipal

hospitals and dispensaries in Bombay according to the Municipal Commissioner D. N. Sukhtankar.

The Daily, 12 Jan. : A West German organisation has sent a Rs. 28 lakh gift package comprising X-ray machines, cardiograms, dental chairs, operation tables, opthalmic instruments, infusion sets, 51 boxes of medicines and an ambulance to be distributed among organisations rendering free medical aid to the poor. The gifts are being channelled through the Shree Gadge Maharaj Mission in Maharashtra.

Financial Express, 2 Apr. : The Chittaranjan National Cancer Research Centre has decided to purchase an electron microscope at a cost of Rs. 20.25 lakhs from Hitachi, a Japanese company. Scientists at the centre have pointed out various violatious of the norm.

Indian Express, 5 Apr. : 12 out of the 92 X ray machines in government hospitals in Maharashtra were not functioning.

Hindustan Times, 10 Apr. : According to a recent WHO report, X-rays were given routinely without medical justification. So used and misused are X-rays that they constitute a major source of exposure to man-made ionizing radiation.

Deccan Herald, 24 Apr. : India would need electronic medical equipment worth about Rs. 1,000 crores to achieve health for all by 2000 A. D. According to Dr. P. P. Gupta, the Secretary to the Department of Electronics, India had produced medical electronics equipment worth Rs. 13 crores in 1982 and was expected to reach Rs. 20 crores in '84-'85.

The Hindu, 26 Apr. : Hospitals attached to five medical colleges in Tamil Nadu are to be provided with dialysers this year, at a cost of Rs. 61 lakhs. The decision was taken in view of the spurt in toxic cases.

The Statesman, 26 May . India's first indigenous body scanner will be ready for installation in September this year at a diagnostic centre in Calcutta. A new manufacturing unit, Uniscans and Sonics will be making six CT head scanners and three CT body scanners in a year.

Hindustan Times, 28 May : A Rs. 16-crore trauma centre is being planned at the AIIMS, New Delhi. It is feared that the setting up of the centre is an excuse to relocate a doctor with the right connections who will be retiring, who has not written a single paper in the last decade and more.

Deccan Herald, 12 Jun : Open heart surgery, including coronary bypass surgery need only cost Rs. 17,000 in India according to Mr. Prathap Reddy the chairman of the Apollo Hospital Pvt. Ltd, Madras which has performed about 100 such operations in less than 100 days, saving the country nearly 12 million in foreign exchange.

Protests, Strikes and Agitations

Free Press Journal, 4 Jan. : Nearly 300 students of the Tibbia Unani Medical College have been on strike since the past one-and-a-half year demanding retrospective affiliation for the past six batches to the Bombay University. Twenty students including eight girls are on indefinite hunger strikes. The College was previously conducting a diploma course in Unani medicine and surgery. The Central Council of Indigenous Medicine directed the college in 1977 to affiliate with the Bombay University, and permitted the college to start a 6-year degree course (BUMS). The college applied for affiliation, but nothing happened.

Times of India, 21 Feb : Junior doctors went on strike at a Municipal hospital in Bombay in protest of the lack of basic facilities, vital druge and essential medical equipment (including bandages).

The Hindu, Mar. : The junior doctors of the Government college in Karnataka who were on an indefinite strike to press for improvements in emergency services, drug availability and increase in stipends and other demands have withdrawn the strike on a promise by the Minister to look into the matter.

Indian Express, 12 Mar. : The agitating students of the Unani Medical College in Bombay have finally succeeded in getting affiliated to the Bombay University.

Free Press Journal, 17 Mar. : The Gujarat chief minister Madhavsinh Solanki rejected the demands of agitating medical students and striking doctors (allopathic) for cancellation of the six-month emergency medical course for homeopathic and ayurvedic doctors.

The Telegraph, 18 Apr. : Nearly 3,000 medical students, house staff and registrars and surgeons are on strike in Orissa demanding upward revision of stipends, better equipment and life saving drugs.

The Statesman, 6 May : The 24-day strike of 3.000 medical students and junior doctors in Orissa has been called off in response to

an appeal by a State-level citizen's committe.

Hindustan Times, 18 May : The strike of junior doctors of the nine medical college hospitals in Bihar has entered the fifth day today. Doctors' demands include absorption of all 4,000 unemployed medical graduates in the state health services.

Deccan Herald, 13 June : Homeopathic students of two colleges in Bangalore have ended their fast, which had been undertaken to press their demands for the government take over of the two private colleges.

The statesman, 25 June : The The 44-day strike by junior doctors which had paralysed functioning of nine medical college hospitals in Bihar has been called off on an assurance that their main demands would be considered shortly.

The Daily, 27 June : The Maharashtra Association of Junior Doctors has called for a day's token strike today. The strike will involve 4,000 resident doctors and 500 post graduate students. They are protesting against the openings of capitation fee medical college in the state.

Professional bodies in health care

The Telegraph, 2 Apr. : Efforts are under way to get the IMA registered as a union, according to Dr. V. Parameshwara, the convener of IMA's first zonal conference held in Bangalore recently.

Business Standard, 11 January : Inaugurating the 59th All-India Medical Conference the president of the IMA, Mr. J. Mathias opposed any short term or a condensed course as demanded by the Nurses Association of Tamil Nadu who had suggested a condensed course for qualified nurses to qualify as rural medical officers. He was also opposed to the change in the medium of education in medical colleges.

Deccan Herald, 18 May : The Karnataka state branch of the Indian Medical Asssociation, IMA, has taken strong exception to the state government's decision to grant permission for starting a new medical college. The state IMA president Dr. V. S. Achar said as many as 8000 medical graduates were unemployed. The state already has 13 medical colleges. More institutions are needed to train paramedical workers, but only medical colleges make money.

Deccan Herald, 24 May : The centre may soon amend the Indian Medical Council Act to put an end to the practice of charging capitation fee by medical colleges. At present there is no provison in the Indian medical council act to take prior approval of the Union government for opening a new college.

Deccan Herald, 1 June : The Homoeopathy Teaching Council of India has demanded immediate government takeover of the two private homeopathy colleges in Bangalore.

Deccan Herald, 6 June : The Karnataka state has through an executive order stopped all admissions to aided and unaided medical colleges for '84-'85 pending the framing of necessary rules under the Karnataka Educational Institutions (Prohibition of capitation fees) Bill, 1984 which has been passed by the state legislature and is yet to get the President's assent.

Compilation : P. P.

The news items have been compiled from the documentation files of the Centre for Education and Documentation, Bombay.

'TB and Society' : MFC Annual Meet

The 1985 Annual Meet of the Medico Friend Circle will focus on 'TB and Society'. The dates of the Meet are January 27 - 29 1985 and the venue, Bangalore. For further information contact : Ravi Narayan, Convener MFC, 326, V Main, I Block, Koramangala, Bangalore 560 034.

Book News

Human Stress, Work and Job Satisfaction : A Critical Approach, Occupational Safety and Health by T.M. Fraser

Series no : 50, ILO, Geneva, 1983, 15 swiss francs.

The book discusses man as a system and a system component, the psychophysiology of human stress, the needs and satisfactions of work, the psychophysiology of work and fatigue, stress mechanisms and their manifestations in work and the interrelationship between stress and satisfaction. He ends with a series of remedial suggestions

The Black Lung Movement In The U. S.

Black Lung Associations and Brown Lung Associations were two Organisations of US Coal miners and textile workers respectively. The bulk of their membership came from disabled workers or their widows and their heroic struggles paved the way for better H & S for all.

Coal mining is a hazardous occupation and one of the earliest unionisation campaigns in the mines gathered momentum in the aftermath of a serious accident. In 1869, an accident in Avandale mine in Pennsylvania killed 179 miners due to the refusal of the mine-owners to build an escape exit. Speaking to the people gathered to mourn the dead, John Siney, President of the Working Men's Benevolent Association (forerunner of the United Mine Workers, said "Men, If you must die with your boots on, die for your families, your homes, your country, bur do not consent to die like rats in a trap for those who have no more interest in you than in the pick you dig with". Thousands of people joined the Association that day !

Despite these pledges to work for health and safety, the struggles for health and safety at work were at a low key, with the struggle of the Union for survival, expansion and improvement in terms of employment being more central. As the union grew, the union bureaucracy in UMW became more entrenched. The union had a department dealing with health and safety but this was not able and did not do much to improve working conditions.

It was only the sixties that the movement for better working conditions took off. The focus became the struggle to get pneumoconiosis- "black lung"- recognised as a compensable disease. State and federal government authorities had for decades denied that coal dust was a hazard and caused disease. In the early sixties diseased workers and some socially active doctors began to tell other workers of the dangers involved. "When we found out what was actually going on,' says Bill Worthington, a leader of the Black Lung movement, "we began to get pretty angry. Coal Companies were making millions of dollers off us, and when we got too sick to work, they said we had "miners asthma" for which there was no compensation."

In November 1978, Consolidated Coal Company, Mine No. 9 in Farmington, West Virginia, blew up killing seventy eight miners. Judith Henderson, window of miner Paul Henderson recalls, "It was cold and snowy that November 20th morning when I had turned the morning news on and heard the world that were to begin a terrible nightmare. The rumour that there had been an explosion was confined, and all but 21 on the midnight shift were trapped. This was where my husband worked and where the nightmare began. We waited, hoped, prayed that our men would be saved, but in vain. On the 10th day they announced the mines would be sealed because the Company Officials felt that no human life could live after this time."

The UMW leadership took advantage of public sympathy to press for a federal mine safety law, ignoring the issue of Black Lung compensation and Occupational health - believing it would jeopordise the passage of a safety law. The Black Lung (BL) movement received a spurt in the membership and an added thrust after the Farmington disaster. The various state Black Lung Associations together with Associations of Disabled Miners and widows along with progressive physicians and lawyers pressed for BL compensation and controls on Coal dust.

In January, 1969, the Virginia (where Farmington mine is located) BL Association was formed and in February and March of that year, 42,000 of the State's 44,000 miners walked off their jobs, pressing for a new law. They marched to the State Capital and demonstrated in front of the State Legislature brandishing blackened lungs obtained from autopsies of pneumoconiosis (Black Lung) victims. The strike hailed as "the most important political strike in modern labour history" forced the first state compensetion for Black Lung in West Virginia.

In December 1969, came a new federal law, the Coal Mine Health and Safety Act of 1969, a comprehensive bill dealing with Black Lung compensation, exposure to coal dust and safety. It specified that coal miners, or their widows, could apply for permanent black lung benefits regardles of when they had quit the mines. Benefits were paid from federal tax revenues and at first 60 percent of the applicants won the benefits. The law also created a federal inspection system to enforce safety and coal dust standards.

The passage of the Act gave new stength to the BLAs. Retired miners and widows who had successfully secured benefits began to lead others through the social security maze, and consolidated themselves into effective country-level organisations. A coalition of such groups was formed for tackling specific national level political battles like the

passage of a new law, seeking to relax the medical eligibility requirements under BL benefits. The Black Lung Benefits Act was passed in 1972, under which a miner who had worked for 15 years underground was presumed to have compensable black lung, if he was totally disabled by lung disease, regardless of what X-Ray findings indicated. However, the social security administration was successful in reducing claims succes rate fram 60% to 10%.

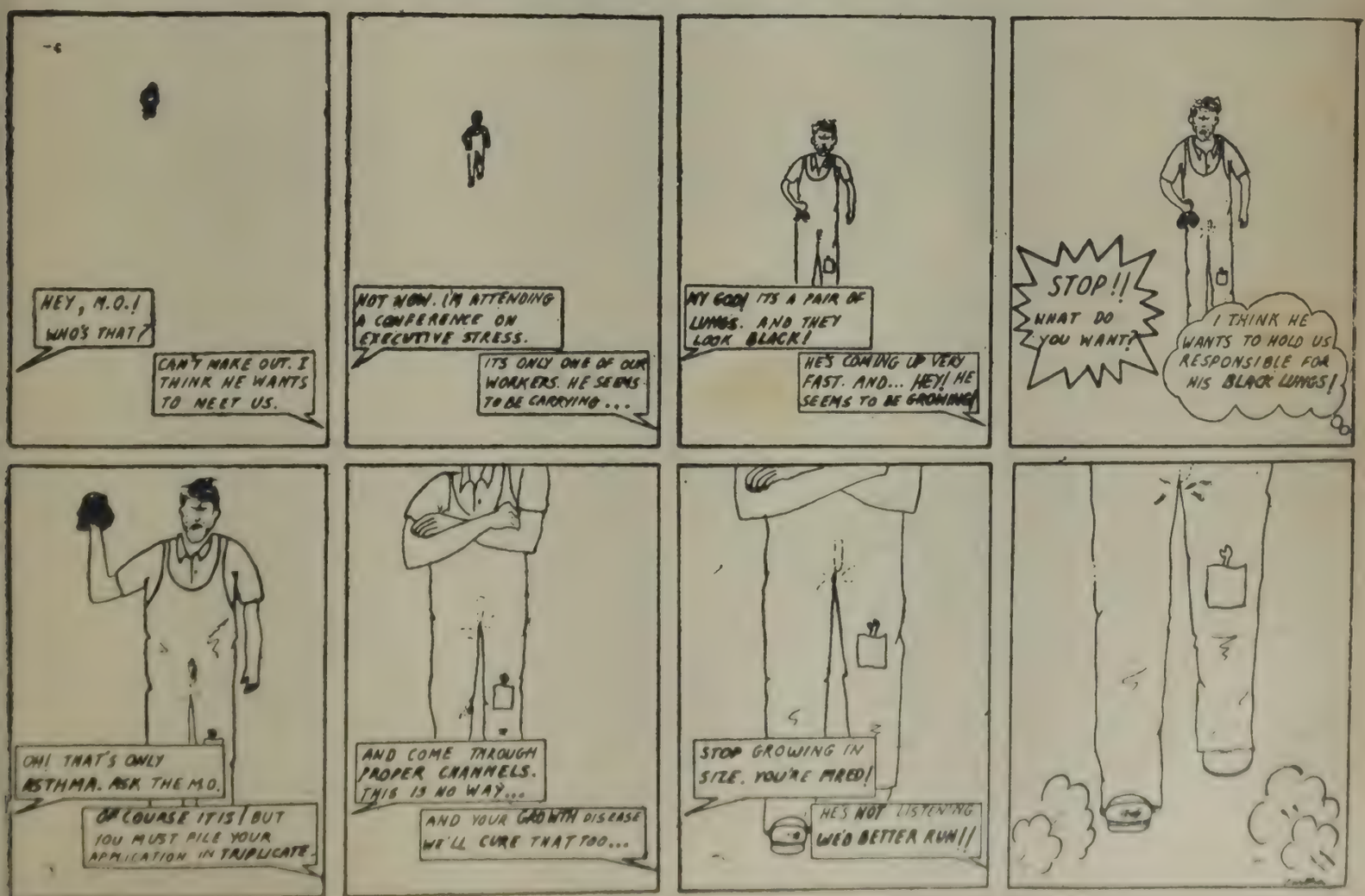
Yet, despite limitations in the implementation of the Act, the black lung revolt has resulted in half a million families getting some financial benefit. The annual payment of a billion dollars is twenty times the total paid out for Occupational Disease for all other workers. Conditions in the mines too have improved, with annual coal mine accident deaths falling from 260 to 132 between the year 1970 to 1974.

The initiative for the BL movement was taken outside UMW, by the force of rank and file pressure. As a conscious organising strategy, partly determined by the nature of the issue, it was the old retired workers, many already ill, who were in the leadership and therefore, free from threat of company reprisals. the movement developed new strategies and a language of its own, with folk songs written about their work lines by many BL members. Two of the songs (reproduced in this issue) were written by an 83 old miner who had spent 40 years in the mines. The use of songs reflects the mass nature of the movement.

In most chemical-caused diseases, exposure is limited to a section of the work-force and very often, unless there is a vigorous educational campaign, it becomes difficult for people to recognise disease as work-related. Once the health effects of coal dust were understood, the obvious and widespread nature of the hazard was one of the reasons of the relative success of coal miners securing compensation for Black Lung. Due to the peculiar nature of the Industry, the position of the miners vis-a-vis the owners was strong. Demand for coal is high, and most coal is manufactured in mines owned by large companies with large unionised work-forces. The public too was sympathetic to the obvious hazards of the job and miners have repeatedly demonstrated their capacity to strike and shut down the mines. These factors can be identified as favouring the emergence of the Black Lung revolt.

The BL Movement changed the face of the Union movement in the mines as well as paved the way for health and safety to become an issue on the agenda of Union struggle and legislative action.

–L. R.



Politics Of Health And Safety

anurag mehra and sandeep agarwal

The unequal contract between labour and capital under the hegemony of capitalism results in the neglect of the workplace environment leading to innumerable hazards to the health of workers. The capitalist class and it's associates, like scientists, technocrats and doctors, who have monopolised the knowledge pertaining to work processes and it's consequences for the working class, have also successfully promoted a model that deals with the problem of health and safety as an individualistic and not a social phenomenon. The working class on the other hand has failed to counter this ideology, especially in backward capitalist countries, because their social and economic conditions do not permit them to go beyond their struggle for better wages.

The authors are members of the Health and Safety Group, Bombay.

Work Relations and Occupational Health

". . . labour is the workers' own life activity, the manifestation of his own life and this activity he sells to another person to secure the necessary means of subsistence. Thus his life activity is for him only a means to enable him to exist. He works in order to live. He does not even reckon labour as a part of his life, it is rather a sacrifice of his life ". . . (Marx)

The social (contract) between labour and capital grants to the owners of capital the right to maximise their profits at the cost of labour. But to the workers, it guarantees only the means to reproduce their labour power, that is, their capacity to work. The worker is thus reduced to an apppendage in the production process, yet another part of the profit making machinery that must be kept 'running' smoothly. For the worker it is not a question just of wages but of his whole experience of work which is hazardous, stressful and monotonous and leads to his physical and spiritual impoverishment. It is at this point of confrontation that labour struggles for better working conditions and organisation of work, and capital tries to minimise its cost of production by minimising its investment in health and safety and restructuring of work, thereby making it more monotonous and less skilled.

The unequal nature of this contract in favour of capital can be clearly seen from the fact that workers have little control over the conditions of work provided to them. At the point of selling their labour power workers lose a large measure of control over their health. They are ensured only wages, not the guarantee of healthy working conditions. In resisting this direct sale of health included in the sale of labour power, the working class struggles against the hegemony of capital at the workplace. Under conditions of commodification of labour power, of which health is a part, any working class demand related to occupational health is a positive assertion of its humanity.

Redefining Occupational Health

We will now examine how capital's definition of occupational health is incorporated in the outlook of bourgeois medicine itself - which lays a claim to being value free, objective and socially neutral.

But first let us look at some of the assumptions of modern medicine itself. The concept of a disease bases itself on the idea that disease is a result of biological agents and their assaults upon the body. The centre of conceptual focus is the organism. The social conditions - poverty, underdevelopment and the consequent everyday living conditions — under which diseases spread, biological pathogens grow and attack malnourished bodies are rarely the point of a doctor's attention. Likewise, this has led to the concept of technological intervention upon the body— drugs, thereby, medical aids — to destroy or cure diseases. Medicine thus believes that with more and more medical technology it can cure or control a diseased body. The social conditions themselves are not touched as the primary causatives; rather their study and elimination is not a doctor's forte.

Within this context of medical ideology then, a disease is reduced to its biological symptoms and cure is reduced to a set of technological tools. The social environment of human beings who suffer, is thought to have very little to do with disease and disability. Therefore health is seen in the individual not exhibiting any overt biological symptoms of a disease. The focus is on the individual, his body which has remained functional in doing what is expected of it, **despite** adverse conditions.

The medico-technical definition of occupational health then, would have us believe that a worker's health is merely his capability to be functional in performing his work. Indeed its origins lie directly in current medical ideology, presented above, which defines health only as an absence of disease or

disability rather than as a positive state of well being. Such an approach inevitably leads to obscuring the large range of damaging conditions to which workers are exposed but to which they have, by sheer necessity, adapted in a very perverse manner in the sense of somehow managing to live with them. But more than this a definition of occupational health of this sort serves a profoundly political purpose. It serves to absolve capital and management of their responsibility in creation of so much misery at the workplace which according to some medically 'established' notions, can be declared non-medical and hence not relating to health at all.

Our purpose here, then, is to point out that we should reject this idea of occupational health and replace it by a more comprehensive and broad notion of health which transcends the narrow idea that ill health is something that can be obviously seen and that which generally requires serious medical intervention. It is only then that long range health disorders, problems of work-derived stress and anxiety, the not so immediately apparent evey-day discomfort and alienation of the workplace, monotony and repititiveness, a lack of creative exercise and the intensity of work will become problems of occupational health. It is only this that will take occupational health beyond the realms of conventional toxicology, industrial hygiene, safety engineering and even so called industrial psychology.

All this brings us to the definitive thesis that the question of occupational health and safety is not primarily a matter of technical definitions nor is its resolution a matter of relevant control technology. It is primarily a question of the social relations of production which finally determine the social conditions of work and thus in a very direct way an outcome of the existing balance of class forces.

In essence, therefore, the question of what constitutes occupational health, its status, and recognition, primarily arise out of the process of class struggle and not out of any technical notion of health or the availability of advanced technologies. And so it follows that a resolution of this quesition is possible only through class struggle where immediate manifestations are the working class struggles for better working conditions. The struggle for better and shorter working hours and working conditions is therefore identical with the struggle for the achievement of health in relation to work.

Having thus established our conception of occupational health, we should proceed to examine some of the ways in which reality on this issue is distorted and falsified.

The Scientificity of Safety Standards

In this regard it is illuminating to examine an instance of how a dehumanised 'science' has as its content, quite explicitly, a partisan point of view in favour of 'Capital'. The 'science' under examination is industrial toxicology in general and the so called 'safety limits' for various industrial chemicals in particular. In professional terminology it is more commonly referred to as 'Threshold Limit Value' - TLV for short. Essentially it refers to that average concentration of chemical present in the environs of the worker beyond which it becomes dangerous to the worker's health — calculated by assuming a daily dosage of fixed exposure time. The dubious nature of this concept can be demonstrated at a number of levels. At the level of ideology the whole notion of such a quantifiable concept arises from a top-down approach to health, wherein the effort is to bring down the chemical concentration of exposure to acceptable limits rather than its exact reverse where the effort is to keep the level of exposure as near zero as possible. This will be clearly seen when we, later on, examine the history ot TLVs in USA.

Above and beyond this, the decision as to what constitutes a health danger in the long and short run, the method of assesment and quantification are all extremely suspect. It would perhaps be correct to state that with management-oriented professional experts the values obtained would be much higher hence more damaging to health than those obtained by a bottom upwards approach. The USSR presents a completely obverse case in this respect when compared to USA, in regard to safety limits. The attempt here is to keep concentrations as low as possible with stringent requirements on the 'Maximum Allowable Concentration' (MAC) In fact, in the USA, the lobbying that accompanies the acceptance of a legal limit, clearly brings out the political nature of the compromise the TLV represents, rather than being an objective and scientific concentration value. As an illustrative case study (quoted in Berman 1978) the history of the asbestos safety standards in USA serves to substantiate the points made above. The National Institute of Occupational Safety and Health (NIOSH) after screening through scientific data recommends a safety limit. Public hearings are then held to debate and decide upon an enforceable and permanant standard. This is the normal, time consuming and expensive procedure that is followed.

Since the 1920s the asbestos manufacturing industry has been aware of the hazards of asbestos and its connection to asbestosis and lung cancer. This however has not deterred the industry in expanding and promoting the use of asbestos even till today. The hazard is compounded by the fact that workers carry home with them asbestos dust and fibres on their clothes and person which can then affect sections of the public. The first propaganda strategy the industry adopted was to promote medical research to dispute asbestos hazards. A number of studies and data therein was suppressed and distorted till 1955 when the connection between cancer and asbestos was unequivocally established. Very promptly scientists from all of the biggest manufacturing establishments disputed this without citing any evidence to the contrary. In fact, till 1960, 63 papers on the health hazards of asbestos were published. Of these 52, which were published independently of industry, showed a positive connection between asbestos and cancer, and the rest 11 studies sponsored by industry presented opposite conclusions. The independent studies remained in scientific and technical journals, inaccessible to the public at large, and the major decisions on standards were left to the industry and a compliant government.

In 1970, with the passage of Occupational Safety and Health Act (OSHA) and the public furore created by some enlightened professionals, some scientists independent of the industry recommended a standard of 2 fibres/cm^3 of air (not larger than 5 mm in length for 8 hrs. a day). Many pressed for a total ban on the use of asbestos. In this atmostphere, since industry based denials of the hazards no longer had public credibility, the strategy was changed. The industry gradually took over financial control of most of the research relating to asbestos in a bid to monopolise all research and thereby minimise critcism of asbestos use. There was a sudden spate in publicity and the flow of funds, leaving hardly any asbestos research untouched by industry control. And even though the industry continued to flout the safety limits, even in the public eye, pressure was brought upon the government by labour to accept the standard of 2 fibres. The US government caught between the pressures of industry and pre-labour lobbies, declared 5 fibres as a temporary standard and initiated public hearings for fixing a permanent one as industry representatives at the hearings claimed that many US plants would have to be shut down if the lower standard of 2 fibres was accepted. The government hurriedly asked a private consultant to study the health effects of concentrations ranging from 2 to 30 fibres and the cost of reducing concentrations to industry. The cost of lives of the workers and the public were not considered but more than that "such economic calculations were to become a permanent part of the standards making'. The government policy was that "the cost to employer of meeting any new occupational health standards must fall within an economic range acceptable to industry". The accepted standard of 5 fibres was reduced to 2 fibres as pressure mounted but by now the NIOSH had recommended a safety limit of 0.1 fibres (1976).

Industry has reacted in many ways to these regulations. Many firms have sold over. Some others have shifted over to Mexico, Taiwan and South Korea where there are no legal limits to asbestos pollution. Many companies have paid out fabulous sums of money as compensation through lawsuits. However the president of one of the companies persisted in insisting that the problem was a technological one 'This is an industrial hygiene problem, not a problem of the public. (Berman 1978).

At the level of soundness of concept, there are numerous laws in the notion of a TLV. For instance, it does not cater to workers who may be hypersensitive to certain chemicals or who are genetically deficient in withstanding the onslaught of such workplace pollutants. The calculation assumes that the people at risk are all healthy young men, rather than women of childbearing age and elder people who have already suffered serious damage to their health. A further examination of the methods of assesment reveals even more significant facts which are, more often than not, relegated to the realm of more scientific controversy. TLVs are commonly arrived at by controlled experimentation on rats, rabbits and the like, and the consequent statistical analysis of the experimental data. These are then extended to apply to human guniea pigs - an extrapolation that has no basis whatever other than the fact that it is chosen as a basis precisely because none other exists, and one is needed to legitimise a certain level of workplace hazards if industrial production is to remain economically feasible. An illustration will make this clear. The teratogen 'thalidomide' dose required to effect a mouse is 31 mg/kg. of body weight whereas that for a human being is 0.5 - 1.0 mg/kg of body weight. If the mouse dose is extended on the body weight basis to apply to human beings, consequences can be disastrous. Still there exist a millions of chemicals for which this distinction may not be known so precisely. They must be taking their daily toll in laborateries and factories. Moreover, TLVs refer to concentrations of isolated chemicals

individually. The synergistic effects, that can result by a mixing of a number of chemicals together are not incorporated into the concept thereby making it even less representative of the hazards at the workplace.

The sanctity of science thus bestowed upon such concepts as TLVs is rather the attempt to project, as socially neutral and objective, knowledge which is overtly political.

Occupational Disease :

Yet another example of the ideological influence, in occupational health, of capital can be seen clearly when it comes to defining what constitutes an occupational disease. For a disease to qualify as being work-derived, the normal bourgeois provision in law is to prove that the disease has exclusive and unequivocal work-related origins. This indeed is a monumental task. Often it is impossible to perform since there are many diseases, not necessarily occupational, which have a lot of symptoms in common with the occupational disease. The confusion between Byssinnosis (a disease derived from inhalation of cotton dust; it affects the lungs and the respiratory system) and chronic lungs disease, is a classic example. Company doctors or management oriented safety staff have often used this confusion to mask the hazardous and disease producing effects of contaminated cotton dust. One medical inspector of factories commented, "All those with respiratory troubles in a textile mill need not necessarily be the victims of byssinnosis. Their standards of nutrition and living environment and habits may have caused the disease, which may appear like byssinnosis." (quoted in Berman, 1978). That this confusion is to some extent objective, is not derived. The above statement as a matter of facts may not be wrong in itself. The point however is that it is the starting assumption of all pre management studies.

Another ploy employed by the management is to simply give the disease a different name. In this process the blame of the disease is shifted from the condition of work to the person suffering from it. An American doctor, for instance, has this to say about byssinosis. It is best described as a 'symptom complex' rather than a disease in the usual sense. We feel that this term may be preferable, first, in order not to unduly alarm the workers as we attempt to protect their health; and secondly, to help avoid unfair designation of cotton as an unduly hazardous material for use in the textile industry, raising the fear the engineering control of it may be costly and that it may be better, therefore, to switch to some less costly material. (Quoted in Berman, 1978). The intention to protect cotton manufacturers profits at the expense of the workers' health could not be clearer. And it is also clear that the choice whether byssinosis is a disease or not, becomes a matter of political outlook, not just scientific information.

Some Aspects Of Industrial Accidents

Management theories of accident, which pose as objective sciences, are a sophisticated mixture of fact and fiction. Despite numerous variations, one theme is central to them - that workers' carelessness is mainly responsible for the majority of injuries at the workplace; that the sole capability and initiative to undertake preventive measures lies with the management. Safety, as such finds little attention in management circles. We will examine some aspects of these theories and their practical and ideological role.

The extreme form of such an outlook can be seen in the behavioural models of accident causation. The reason for accidents are thus seen in the accident-proneness of individual workers. Accident-proneness a phrase carved sometime in the early twenties, immediately became popular among industrial psychologists who claimed that workers are doomed to be tension and anxiety ridden, and therefore liable to carelessness at the workplace. Industrial psychologists, at great pains, have defined various kinds of nervous disorders existent in workers and their co-relation with actual incidence of injuries. *(Table overleaf)*

In spite of the usage of sophisticated psychological terminology, this theory very faithfully reflects the inherent attitudes of owners and managements, that workers are ignorant, careless, destructive and inferior. One does not find many overt references to such models today.

Another model pictures accidents as a culmination chain of multiple events. It is claimed that there is no single identifiable reason for accidents but a host of factors operating simultaneously. Safety films are made which depict situations that make an accident look really like an accidental occurance. A machine goes out of order. A maintainance person tests the machine, opens the guard and then leaves it running while going for a cup of tea. The cleaner passes by, accidentally dropping some piece of scrap on the gangway. An unsuspecting office clerk hurriedly crossing the gangway, steps over the scrap piece, trips and lands his hand into the unguarded running machine. Then a question is raised wisely as to who is responsible for the injury. The movie usually ends with prescriptions amounting to less carelessness and

Occupational Syndrome	Clinical or Dynamic Diagnosis Associated
Accident Syndrome	Impulsive characters anxiety reaction
Moonlighting	Compulsive personality, often with marital problems
Pulmonary insufficiency ("pneumoconiosis", "emphysema", "chronic bronchitis")	Depressive reaction, anxiety reaction, psychophysiological reaction (asthma)
Women employees	Physiological cycles
Grievance proneness	Paranoid personality, compulsive personality, depressive reaction.

Source : Powles, W. E. and W. D. Ross. "Industrial and Occupational Psychiarty" in American Handbook of Phychiatry, Basic Books, 1966

more safety consciousness on the part of workers. There are obvious ideological purposes which explanations of this kind serve. To a worker, it obscures the fact that most accidents occur because of unsafe work design, unguarded machines, faulty equipment and high work intensity. It also absolves the management of its responsibility. More than that it puts the blame on the workers, thereby preventing any protest on their part.

H. W. Heinrich, a US expert, did a massive study of 75,000 accidents and concluded that a distinction should be made between accidents and injuries. All accidents, according to him, do not lead to injuries. On the contrary they go unnoticed till a major injury is caused. He estimated that for every major injury, there are 29 minor injuries and 300 accidents without causing injuries. He, while advocating preventive measures, classified about 88 percent of the 75,000 accidents as caused primarily by "unsafe action" (unsafe action is defined as a departure from the established work procedure). The percentage thus classified can very widely depending on the investigators opinion about the extent to which physical conditions reasonably need to be modified to prevent injury. This choice is clearly political for technically, it is impossible to have a sharp dividing line. Cases which are normally identified as blatant examples of unsafe action on the part of workers can also be seen in the context of improper safety training on the one hand and increasing work intensity, monotony, fatigue, alienation on the other.

Safety engineers strongly advocate their case before the managements by professing that it is cheaper to prevent accidents in the long run. Terms like 'loss control' and 'damage control' are used to give this notion a scientific sanctity. It is maintained that accidents not only cause injuries, but also loss of property, loss of man and machine hours, stoppage of work etc.; the management therefore must invest in preventing accidents out of there own wish because they will profit by this. This is a major argument given by industries to project their self interest in taking up safety measures. Needless to say, at its very outset, their dehumanizing calculation betrays its ideological character. Cheysler Corporation of US actually did this calculation and concluded that with the costs of an accident. In a country like India, since compensation is negligible, there is no reason for companies to install safety measures, unless strong union pressures exist.

The problematic of accidents can be questioned at yet another level. Accidents are defined as notifiable only when the injured worker does not report for work within 48 hours (in India). This is in keeping with a bourgeois notion of health which believes in funcitonality, fatigue, sprains, aches, nicks, cuts, burns, minor eye injuries, loss of consciousness-all these form an important part of working life but are never included in accident figures. It is not surprising, that even by conservative estimates, if these injuries are accounted for, accident, figures will multiply at least tenfold. These aspects of quality of work are of prime concern for the workers. Cuts on hands during assembly, muscular strain and aches due to improper work-place design, specks of dust in the eye during grinding may go unnoticed by those who

don't work with machines directly. The present design of workplace is machine-centred, directed towards maximization of productivity. Even though a more safety-oriented design may not cost much the outlook sometimes of the designer and industrial engineers does not permit them to give importance to safety. Workers of course, are not granted any role in the design activity.

The present day managements try to impress upon the workers and the public at large that workplace health hazards have been reduced drastically with improved technologies and automation of production. Accident statistics are offered to confirm this. But such innocuous claims, in fact, serve a distinctive ideological function. Long range health hazards, problems of stress and monotony, the quality of working life, all are kept into the background while displaying of glittering success in accident control. By hiding long term health hazards, management attempts to lend credibility to the gradualist theory of occupational hazards, where slow technological changes are seen as determining factors in reduction of health hazards.

Management Monopolony over Information

Thus one of the ways in which Capital seeks to secure its domination over labour is by monopolising and controlling the flow of information relating to work. This is also true of information regarding health hazards and safety, especially if such knowledge can become a threat to profit.

As a case of outright concealment of true facts, the beryllium industry in the US provides a typical example. For almost twenty years industry and the Atomic Energy Commission had claimed worker exposure to berylium was harmless. Only after the death of a worker was this notion challenged. One of the pioneers of occupational medicine Dr. Alice Hamilton wrote of her findings, "With rare exceptions, industry and insurance companies withhold data on occupational disease—its character and incidence. This fact has great influence on the acquiring of knowledge of industrial illness in other as well as the beryllium-using industry in the US". The conclusions placed responsibility for beryllium poisoning with private industrialists. One of her own students wrote, "A few consultant doctors and industrial hygienists, by their publications, talks at professional societies and appearances in court, appear to have been used by some members of the beryllium industry to further what are considered legitimate economic ends." (Hardy, 1965).

We have seen in the case of asbestosis, the active dissemination of false information and aggressive promotion of research to generate this kind of information by the industry to dispute the actual hazards which were becoming known to the scientific community. In cases where adverse opinion is not strong, companies prefer to keep silent on the hazards of materials in use. For example, in two Mexican border towns employees of the US firm Amatex, engaged in the manufacture of asbestos, heard about the hazards from news accounts and not from their employer. (Castlemen and Vera, 1982). Nearer home, in Bombay, a fertiliser unit uses casual workers to perform necessary tasks in the most polluted points in the plant — where even regular workers refuse to tread. Apart from the very weak position of casual labourers, their ignorance and illiteracy helps the management in stifling whatever little resistance they may have to offer in the face of such barbaric assignments. The plants continue to pollute heavily but at the expense of a number of casual worker fatalities. Another example of the political helplessness and the exploitation of ignorance of contract workers is in the textile industry where they handle waste or clean machinery - both operations where cotton dust exposure is the highest. And according to the medical inspector of factories, 'This way quite a large group of textile workers prone to byssinosis go undetected. It is precisely ignorance of this kind, deliberately perpetrated by managements, that allows them to violate health and safety regulations blatantly.'

This practice of concealment, of cultivations of systematic disinformation, stems from a more general philosophical outlook of the management - the concept that workers have to be managed and controlled. Braverman's seminal critique of the capitalist organisation of work sums up the essence of the process, "It becomes essential for the capitalist, that control over the labour process pass from the hands of the worker into his own. This transition represents itself in history as the progressive alienation of the process of production from the worker and to the capitalist it presents itself as the problem of management" (Braverman, 1979).

The effects of 'scientific' management on the working class are manifold. Firstly the origins of work related stress lie in the deskilling of the worker, the destruction of his craft and the consequent division of labour wherein he performs monotonous, repititive operations; the seperation of execution and conception of work leads to a management monopoly over creativity. Even more

significantly it has led to the isolation of the worker behind an information barrier. His awareness and natural curiosity with regard to his work have been bullied into an indifference towards the science of his skill. Since he no longer participates in the totality of the process of production but only as a component part, he no longer feels the necessity of knowledge other than learning the most basic operations. The worker, who at one time, had his own craft journals, today needs the help of the professional to decipher the mysterious language of technology, medicine and law.

Management monopoly over knowledge is acquired at a more sophisticated level through the control over the specialities such as occupational medicine industrial hyiegene and safety engineering. One of the major political functions of such disciplines has been to mask overtly political knowledge as being socially neutral. The dominant ideology that the management inculcates within these disciplines is its own. This is made easier by the fact that most doctors are recruited to industry from private practice and start out with the anti-worker attitudes common to their class background. Furthermore by according them a low status in the management hierarchy of power, their urge for identification and conformity with management views and practice is intensified. Knowledge, thus restricted through these mechanisms in the hands of a pre-capital class becomes an instrument of power and manipulation. As one spokesman of the industry put it in relation. to workers' health : Our aim is " to keep a check of the workers' health while telling them as little as possible." (Berman, 1978)

The Ideological Function of Law

It is a common feature of bourgeois governments to enact laws which are progressive in content but which are never implemented properly. A number of reasons can account for this.

Firstly, such legislation and this is true for a number of regulations also, significantly those relating to health and safety - remains largely unimplemented because the enforcement agencies created to implement them are given very few powers. Whatever little exists as an enforcement structure is not only class based but also corrupt and bureaucratic. But that is only a part of the story. The second, and more important reason lies in the protective function of state in bringing such legislation into force. It projects the state as an authority which is above all classes and legally legitimises a certain level of anti-working class institutions and activities. It also helps to establish a certain measure of control over information and data which aids the state in regualting the issue in question in favour of capital (which it dominantly represents). To give an obvious analogy the state intervenes to 'protect' tribals with its whole machinery of police, forest officers and magistrates, from the clutches of 'extremists'. This protective function need not be carried out so forcefully and at times, offering the illusion of 'progressiveness' is enough to contain protest movements which in fact may be demanding much more.

Even though progressive legislation relating to health and safety in India or even elsewhere, represents an advantage to the working class and is often used by activists to their gain, the structure of factories inspectorate, its powers, the status of occupational health and safety legislation as well as regulations. bear out above aspects of such regulations. At the level of legislation an important point needs to be made. Such 'progressive' legislation is often flaunted in propaganda for its pro-worker content while not mentioning that pretty little is actually being done to enforce it. Minimum wages are therefore paid on paper; thousands of bonded labourers are released every year and the nation has perhaps the cleanest and safest factories in the world !

Health and Safety Policy : US vs Sweden

The most incisive demonstration that health and safety issues are political comes from a comparison of the ways in which different governments with different ideologies respond to such issues.

As Navarro rightly asserts, it is class conflict and the balance of forces berween capital and labour that dictate the policies of a nation - states, rather than any technical state of development in the knowledge of related disciplines or the attitudes of professional experts or the socalled 'national character traits'. An analytical comparison of two countries namely US and Sweden will make this clear. (Navarro, 1983)

From 1932 to 1976 the Social Democratic Party has been in power in Sweden even though in its own internal configurations there occurred changes from mild, legalistic evolution towards socialism to that of social reformism with the framework of capitalism it remained quite responsive to the pressures of the working-class and the middle, clerical and professional classes. On this situation capital has sacrificed its stinginess in short-term matters to sateguard its long-term profitability.

Consequently workers have a far greater control over their work in most respects and notably they are

adhered to. Managements tend to listen to factory inspectors and implement their suggestions for fear of closure.

In contrast, in US, almost every indictment by the factory inspector is hauled to court. The antagonism between state safety agencies and the industry is sharp and clear. And quite often owners get away with safety violations either for free or for an amount which is much less than that required for preventive measures.

These differences stem not, contary to what American Professor Kelman says, from the assertive nature of American people and their respect for individual rights, as against the much more cowed down and submissive-to-authority Swedish counterpart, but from the differences in the political outlook of the two regimes and the relative proximity to labour and capital.

There are some distinctive features in the above comparison. In Sweden the working class has acted as a coherent whole, in forcing the government to pass a large number of health legislations, and has consistently favoured the formation of laws and acts rather than indulge in private agreements with the owners at the level of the enterprise or craft. On the other hand, in the US the mode of individual agreement is prevalent which effectively neutralises the collective bargaining power of labour as a class. Even in the official setting of standards it is lobbying and bargaining that decide the level of compromise rather than a collective pressure from the working class. And to complement this on floor and plant level Swedish workers have much greater powers including the refusal to work and much greater access to the enforcement agencies than their American counterpart.

Monetary Demands and Occupational Hazards and Safety

Whenever labour demands betterment of working conditions, capital's standard response is to bargain by offering monetary benefits in exchange for that irreversible loss of health. This strategy followed by managements is straight forward since the cost of such compensatory payments is often far lower than the cost to actually improve the working conditions. For instance an extremely dirty asbestos plant in the US was fined a paltry 210 dollars for having violated the OSHA standards by a large margin ! (Berman 1978).

The relationship of monetary demands and health and safety demands becomes very complex at the level of organised struggle by the working class. To begin with, therefore, a distinction must be made between health and safety demands which talk of changing the actual working conditions and health and safety **related** demands which propose some other mode of exchange, i.e. stake a claim in the form the incentives or benefits in lieu of the occupational hazards. The myth that management perpetuates is to confuse between the two and in the ultimate analysis substitute the latter for the former. In promoting this myth capital exploits a number of other falsely held beliefs, for instance the inevitability of pollution and hazards as being inherent to **all** kinds of technology. The natural implication is that the only way in which hazards can be paid for is by monetary compensation. By making monetary benefits and allowances the exclusive point of bargaining, managements use compensation ideology firstly, to save on costs and secondly to contain more authentic and dangerous forms of working class protests. Altogether, it gives to the management a licence to pour out its hazards and effluents into the work environment. By institutionalising discontent over health and safety within the framework of its own ideology, Capital seeks to assert its ideological hegemony.

Unfortunately this ideology of compensation and insurance, which seeks to blur the distinction between when compensation should be demanded and when not, breeds quite easily in labour surplus economies of the Third World and the West. In the under-developed countries where wages are meagre, unemployment and consequent job insecurity looms large, the working class is often forced into positions of weakness. In such a milieu even the demand for minimal compensation payments can be a militant victory for workers. However, in nations like the US too unions have to fight against the fear of loss of job. But wages are not that meagre and militant union laedership, rank and file activist and the workers themselves have insisted on actual changes in working conditions. An enlightened working class has insisted on compensation as a minimal demand and a change in working conditions as an ultimate objective. This and only this will ensure that Capital cannot indulge in the unbridled purchase of health of labouring human beings.

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ILLNESS AND ACCIDENT REPORTING IN INDUSTRY

A Review of Statistics and Legislation in India

jean d'cunha, loy rego, mihir desai and vijay kanhere

Abuse of workers' well-being at their workplace is a characteristic feature of industrial capitalism, especially backward capitalism, where workers' consciousness about health rights is submerged under the burden of immediate survival. The problems and manipulations associated with reporting (in fact gross under-reporting) of occupational accidents and diseases, the inert nature of laws pertaining to health and safety at the workplace, the collusion between the management protectors and enforcers of the laws and the medical profession; and the workers' and their unions' apathy towards this issue are highlighted by the authors who are members of the Health and Safety Unit, Bombay.

While the deaths in the communal riots in Bhiwandi, or the casualties in Punjab, shock the country and emphasise the horror of events, the fact that every-day, at work, many are wounded and some people die, due to industrial accidents and occupational diseases (IA and OD) produces few headlines and no danger signals. The workplace is becoming a battle-field, with casualties as severe as many a modern war; and despite this genocide of so many workers, the problem of health and safety at work is far from being a front line area of social and political concern and action in India. Exploring possibilities for action thus becomes necessary.

The first step in acting on a problem is to know about it, and understand its dynamics correctly. It is important, therefore, to know the extent of IA and OD in the country, the reasons for its occurence, and the perceptions and attitudes of the government, public bodies, industry, workers and unions to the problem.

In this article we attempt an examination of the statistics available with the government, make, an estimate of accidents and diseases actually occurring and identify and discuss the reasons for their occurence. However, in the absence of an organized health and safety movement by workers in India, the poverty of documented information on the same is inevitable. Our perceptions of the problem are thus tentative and impressionistic as they are based on a limited number of observations and interviews with workers.

Occupational Accidents and Diseases : A Statistical Profile

Every year, in India, 3-4 lakh people are injured and about 800 of them lose their lives due to industrial accidents. Table I shows these figures for 6 years. From these figures it becomes obvious that for this period, 1126 persons were injured and 3 persons lost their lives daily, due to industrial accidents. [1] In Maharashtra alone, one fatal accident occurs on the average every two days, while in Uttar Pradesh, once in three days.

Accidents cause an absence from work due to temporary disablement. For a sample year 1980, on the basis of available figures, accidents resulted in 3,322,829 (3.3 million) mandays absence from work due to disablement (ILYB 1981). Whereas 21.3 million man-days were lost due to strikes and lockouts (industrial disputes) during this period. (PBLS, 1982, 1983)

This means that there is a daily absenteeism of 11,076 workers due to industrial accidents, and on an average it takes 10 days for a person to recover from his accident. And the above figures pertain only to industrial accidents, those occuring in factories, excluding those workplaces like ports and docks, Railways and Mines. Table II shows casualties occuring to employees in Mines, Railways and Ports and Docks. Including these casualties makes the picture far more alarming raising the daily toll to almost 5 fatalities and 1228 injuries. [2]

Certain states have a larger incidence of accidents. Six states Maharashtra, West Bengal, Gujarat, Madhya Pradesh, Tamil Nadu and Uttar Pradesh, with 62.5% of total factory employment accounted for over 80% of the injuries. Rather than conclude that industries in these states are more hazardous, the statistics probably reflect a relatively better rate of reporting. But it is clear, however, that injuries themselves are on the rise. In Maharashtra, which today has the highest share of injuries, while employment rose by 40% during 1961 to 1978, injuries rose by over 100% (Nair, 1982).

Different industries have different rates of accidents, some industries being inherently more hazardous. Five industries, textiles, basic metal and metal products, machinery (manufacture), chemicals and transport equipment, with just about 60% of the total factory employment, account for over 80% of the

injuries. Textiles, the oldest industry in the country, with 24% of the total employment has the highest share (54%) of the injuries. In fact, injuries in the textile industry have increased by 626% between 1951 and 1978, while in that period, employment has grown by only 38% (Nair, 1982).

Nair's article shows that both fatal and non-fatal industrial accidents have been rising over the last 30 years. Fatal injuries rose by 225% from 248 in 1950 to 806 in 1980 and non-fatal, even more sharply by 393% from 76,000 in 1950 to more than 355,000 in 1980. He argues further that this cannot be explained as a result of industrial expansion alone, as accidents have increased relative to the rise in persons employed and increase in the number of factories. While the number of factories has increased by 388% from 32,000 in 1951 to 125,000 in 1978 average daily employment has risen by only 120% from 3000,000 in 1950 to 6500,000 in 1978 (Nair, 1982).

A comparison of rates of accidents in India and other countries is also revealing. During 1976, the number of accidents per 100 workers employed in all manufacturing industries was India (60.2) UK (34.8) and USA (24.74) (CLI)

While some statistical experts challenge the validity of the above due to different methods for reporting accidents in different countries, comparison of fatal accident rates reveals the same trend. The figures of number of fatal injuries per million man hours worked during 1979 and 1980 are (PBLS, 1982, 1983)

	1979	1980
USA	0.03	—
UK	0.03	0.03
Japan	0.02	0 01
Yugoslavia	0.07	0.08
India	0.15	0.15

Thus accident rates in India are far more than many industrialised countries.

This alarming magnitude of accidents is according to various experts, however, a gross under-estimation to say the least, in view of the numerous cases that go unreported.

Occupational Diseases :

Accidents are only one of the industrial killers. Occupational diseases are another one and compared to accidents are far more insiduous in their onset and therefore often just not perceptible. And yet, in terms of damage to health, they are as fearsome, perhaps more so.

Turning to the disease chart, Table III, shows the number of cases of occupational diseases reported all over India for the period from 1960 (last year for which statistics are available). 639 cases have been reported during these 21 years giving an average of a paltry 30 cases a year.

Table IV shows the break-up of the 98 cases of diseases reported during the period 1976 to 1980 (detailed statistics only available for this period). Out of 22 types of occupational diseases notifiable, only 11 of these have been reported during this period. Of those un-reported are such well known killers like Byssinossis, Brownlung which all textile workers are prone to, and Carbon disulphide poisoning (in rayon plants) which, as Padmanabhan's study (Padmanabham, 1983) "the Gas Chamber of the Chambal" showed, affected many workers. Noise induced hearing loss, one of the commonest and most widespread disorder has also gone unreported. And among the reported diseases only one case of asbestosis was reported in five years, when during this very period, an American asbestos company John-Mansville went bankrupt due to successful compensation suits filed against it by its workers. (Castleman and Vera, 1982).

The geographical spread of these cases indicates that out of the 22 states and Union territories, only 8 states report any cases at all. There are no cases from industrially advanced states like Tamil Nadu and Andhra or from Madhya Pradesh, Uttar Pradesh and Kerala.

Table V shows the number of cases reported under the Workman's Compensation Act 1923 for the years 1966 to 1979. A total of 1159 cases were reported during these 14 years, an average of 83 cases reported a year. For the 10 years for which break-up is available, of the 710 cases reported, 303 people died and 395 were permanantly disabled. These cases cover only five states out of the 22 states in the country, implying that no compensation for OD had been paid during this 14 year period in states like Maharashtra, West Bengal, Tamil Nadu or Uttar Pradesh. Of the 6 states from which there are reports, Kerala and Orissa report in 1 year only, Madhya Pradesh twice, Andhra Pradesh in 7 years. Karnataka is the only state reporting every year. In fact 90 percent of the OD reports are from Karnataka.

There are 22 types of diseases which are compensable under the Workman's Compensation Act 1923, for the period in question, though this has been raised to 34 since July 1984. For the years 1972 to 1980, during which period detailed statistics are

available, all 642 cases reported are that of silicosis. 638 of them are from Karnataka[3]. The other 21 diseases therefore, have never been reported or compensated.

Table VI shows the incidence of various notifiable and compensable diseases identified in the Indian environment by research studies, and indicates that 6% to 44% of workers under study are affected by various OD. To overcome the complete absence of data on national incidence of diseases an attempt is made to estimates the same from the studies done. Even conservative estimates of a few diseases from a few workplaces reveal that thousands of workers have been affected. For one disease in one industry only (silicosis in potteries) we get an estimate of 1845 cases, which is itself more than the total number of cases, reported for all diseases (1798) under both, the Factories, and Workmen's compensation acts for the relevant periods under study.

Let us consider the cases of asbestosis, lead poisoning and byssinossis - 3 dreaded and rampant diseases separately.

Asbestosis : Our estimates indicate about 1500 workers suffer from this disease nationally among those working in manufacture of asbestos cement and its products alone. Thus, workers handling finished products in other locations are also affected by disease, for which no estimate has been made yet. Only one case is reported to date under the Factories Act. In the West, because of the campaign by workers, supported by the general public, detection of asbestosis cases hase increased and working conditions have been imperoved and yet in 1978 US Health authorities estimated 5000 new cases of asbestosis due to past exposure would be detected annually till the end of this century. (Audyogjk Jeevan 5 March, 1982)

Lead Poisoning: Our estimates indicate over 500 workers to be suffering from this disease nationally in one industry alone-storage battery manufacture (Chakravarti and Dhar, 1981) Since the industry uses 40% of the total consumption of lead in India. the total figure for lead poisoning itself are likely to be much higher. Only 10 cases have been reported from Bihar, while not a single case has been reported from any of the factories or states where the study (Table VI) was carried out.

Byssinossis: Our estimates reveal that 37 thousand people are affected by this disease from cotton textile manufacture in the organised sector alone. Those working in cotton ginning, power looms and other types of textiles are excluded from this estimate. Their inclusion would raise the figure still higher and yet not a single case of byssinossis has ever been reported.

All these are but a few cases of positive 'death on the job' the proportion and intensity of which is reaching astronomical dimensions.

Why Does This Happen ?

The decapitated worker that emerges from impoverished and dehumanising work and living conditions is the legacy that industrial capitalism has handed down to us. That the wheels of such a system are propelled by profit, needs no further elaboration. In its competitive bid for survival and capital accumulation, newer production processes and products are introduced with 'cost-criteria, gaining an edge over 'health, safety and worker welfare criteria.' The increasing monetary stress, fatigue, decreased creativity, skill and control of newer work processes are evidences of the above. The numerous toxic-chemical agents, biological agents (fungi, bacteria, parasites), physical agents (noise, extreme temperatures and humidity, radiation, abnormal airpressure, weightlifting, repeated motions, shocks and vibrations) and mechanical agents, which are callously introduced at the workplace lead to further impoverishment of a worker's life. All this again is consistent with the principle of generalized commodity production, where the worker is perceived as a commodity and his capacity to labour commanding a price. Hence in a labour surplus capitalist economy, any depreciation in the health and wellbeing of a worker, arising out of his work and living conditions and leading to a drop in his efficiency and productivity at work, may be overcome by a replacement from the industrial reserve army.

Attitudes to Health and safety : The State Workers Unions and Management

It is a paradox that though the Directive Principles of State Policy guarantee the health, safety and well-being (including occupational health and safety) to every citizen, government's attitude to the problem has been callous. There is no well established Industrial Health Service Agency for occupational diseases in India. While the objectives and policy measures of government health programmes have been geared towards control and eradication of communicable diseases, curative and preventive health services in rural areas via Primary Health Centres, training for medical staff, government's

treatment of occupational Health and safety has been stepmotherly. What is also worth noting is that very little emphasis is accorded to occupational health and safety in the medical syllabus and in the training of medical personnel.

The State's piecemeal tteatment of the problem of occupational Health and Safety is further refelcted in four pieces of legislation allegedly designed to ensure the health and wellbeing of the worker.

The law regarding health and safety of workers in India, like the law in any other country must be viewed from three angles :

(a) The underlying principles behind the whole gamut of health and safety laws (In India this is achieved through the Employer's Liability Act, 1926)

(b) A set of rules defining duties meant to be imposed so as to reduce the risks i. e. the preventive angle (The Factories Act, 1948, The Mines Act etc.)

(c) The instrument to secure forms of compensation for the employee in which the rules governing liability are formulated and interpreted largely after the event, to determine the fault and then to align damages or other forms of compensation. according to the measure of the injury, i. e. the curative aspect. (This is represented by the Employer's State Insurance Act, 1958 - ESI Act and the Workmen's Compensation Act, 1923). But ultimately, law is, what law does, and hence it becomes extremely relevant to examine these laws not only with respect to their scope and formulation, but also with respect to the extent and nature of their implementation. It is also necessary to determine the governing ideology behind these laws, the extent to which they protect the worker and changes that need to be made in these laws.

The Employer's Liability Act 1926 : Prior to 1926, the governing ideology, as reflected in laws, or lack of them, was that whenever an employee, a natural autonomous individual, chooses to enter into a contract of employment with an employer - another natural autonomous individual - the employee is presumed to accept all the risks involved in the employment. The natural consequence was that an employer could not be held liable for any injury suffered by the employee even if it was due to the horrendous and thoroughly unhygenic working conditions. A further underlying principle was that in case the contract of employment imposed some liability upon the employer, he could avoid it, if the injury caused had resulted from a co-worker's or another person's negligence. This is what in legal parlance was known as the doctrine of common employment. The Employer's Liability Act abolished both these principles establishing a new and progressive principle that no employee could be presumed to have accepted any risk involved in any employment. The Act does not stop here but further prohibits any Agreement which puts even partial responsibility of an employment risk on the worker. The act also abolished the concept of common employment. The resulting consequence of this Act quite simply is that the risks involved in Employment are altogether the employer's responsibility and neither a contrary agreement with the workmen nor the negligence of a co-workman can change this position.

Though the Act as such is a radical departure from the earlier concept, it still leaves much to be desired. It is curative in nature, as it lays down the principles regarding the remedies available to the workers subsequent to the infirmity or disease but does not lay down any principle regarding the prevention of unsafe working condition. Guarantee of healthy working condition is not even laid down as a principle.

The Factories Act, 1948 : This is the only act of general applicability which is preventive in nature. It allegedly provides for positive action to be taken by the employer to ensure a safe place of work. The act however remains a paper tiger. It provides various facilities and protections to the workers at the shopfloor without affording either the woker or the Unions a right to demand the same. The workers cannot directly take a factory owner to court even if he violates all the provisions of the act. The grievances are funnelled through the Inspector of Factories. This a classic example of taking away with the left hand what is given by the right. The act and the rules which run into 300 pages or more do not contain guidelines for procedures in which grievances may be brought to the fore. There is no mention whatsoever as to how workers are supposed to demand what is due to them.

The officially recorded statistics on occupational accidents (O.A's) are based on accident reports received under the Factories Act, 1948 by the factories inspectorate, while that of occupational disease (O.D's) are based on reports received under the Workmen's Compensation Act, 1923 and the Factories Act, 1948.

The introduction to the Section on O. D. in the Labour Year Book (Compiled by the Labour Bureau,

Simla), reproduced with montonous regularity every year, notes in a tone of bureaucratic statistician's irony- "The available information regarding the incidence of O.D's is rather scanty". Horrifying though the figures for accidents are (see Tables I and II), these statistics present a picture far from the true one. The reporting of OD's has actually declined over the years while 267 cases were reported during the five year period 1960-64, only 98 cases were reported during the five year period 1976-80 (See Table III). This occurs despite the fact that the Factories Act, 1948 lists 22 O. D's which are notifiable under Section 89, making it obligatory for the factory managements to furnish information of O.D's contracted by their employees to the Chief Inspeetor of Factoris (CIF). This section of the Act also requires any medical practitioner attending on persons suffering from such cases to the CIF concerned. However, the above mentioned facts do not represent a decline in the incidence of O.D's but rather the increased inefficiency, ineffectiveness and corruption among those responsible for reporting cases and implementing the Act, right from the doctors to factory managements and Inspectors.

The character of the Factory Inspectorate and the ESIS is best exemplified by the stand taken in the case of Rajagopal, a worker from the Asbestos Company, Hindustan Ferodo, a subsidiary of the British Multinational Turner and Newall (CED, 1983). While Rajagopal was clearly found to be suffering from asbestosis by Sion Hospital, Bombay, ESI and various private practitioners found him to be suffering from Asthma while the verdict of the Medical Inspector of Factories (MIF) Maharashtra was that he was suffering from " acute bronchitis " (Behara, 1983). When a writ petition was filed in the Bombay Highcourt, he only obtained the additional relief of a freshly formed ESI Medical Board, not even composed of specialists in OD's, which gave a verdict of 'Chronic Bronchitis' (CED, 1983), and this during a period when a research study of CLI (See Table VI) showed a 36.5% Percent incidence of asbestosis.

The Directorate General of Factory Advisory Services (DGFAS) says "Many of the Factory Inspectorates are not in a position to effectively discharge their functions". This contention bears truth.

The Medical Inspector of Factories (MIF) and Certifying Surgoen (CS) are two authorities under the Factories Act charged with the responsibility of monitoring occupational health, among other functions. In particular they are responsible for medically examining workers, working in 20 scheduled hazardous operations - approximately corresponding to work places where workers may contact the notifiable diseases.

Of the 26 States and Union Territories for which statistic (1980-81) are available, 10 have no MIF at all while the remaining 16 have only 29 MIF'S totally. (Industrial Safety Chronicle, 1934). Of the 21 States and Union Territories for which figures (1980 81) are available, 12 have no CS's at all, while the remaining 9 have 15 CS's. (ILYB, 1982) While understaffing clearly indicates government's apathy, considering the technical incompetence and inefficiency of these authorities, one is uncertain about what purposes the mere appointment of additional inspectors will serve. Furthermore, the meagre remuneration too inhtbits the incentive to honest work.

It is no wonder then that in 1979 out of 1,22,931 registered factories 79,258, i.e. 64.47 percent were inspected. (ILYB, 1982)

Again the channels for the Factory Inspector to come to know of infringements like underreporting are non-existent since workers or unions do not have any statutory right or responsibility to report accidents. Where the Factory/Medical Inspector come to know of such cases informally, there are more lucrative methods of tackling the situation. This is evidenced by the fact that only a fraction of the anyway very few prosecutions are about under-reporting of CD and OA (See Table VII).

There are those factories too who submit no annual returns at all (about 35% according to one estimate) and therefore do not report OA's or OD's. (ILYB, 1982) Here too prosecutions are unheard of. Apart from this, the penalties provided for erring employers are so meagre, that even the employers who are brought to book continue to blatantly flout the law. Not only does the implementation of the Factories Act leave much to be desired, its scope and farmulation too is ridden with infirmities.

A factory as defined under the Act includes those places employing 10 or more workers and having a manufacturing process with the use of power, or places employing 20 or more workers without power. Thus with the large extent of sub-contracting in India, there are an increasing number af small scale industries which do not fall within the perview of the Act. They are not statutorily bound to comply with the act and therefore do not report OAs or ODs. The construction and Transport Industries too do not report OAs under the Act, though they are

the most hazardous and accident prone. The definition of a "factory" thus excludes a major portion of the working class in India from the scope of the Act.

The act extensively deals with cleanliness, lighting, protection from dust, fumes etc. But in most of these categories the reasonably practical measures to be taken are left to the management's discretion. This extends even to the fencing of machinery, where inspite of numerous detailed provisions being laid down it is the management that ultimately decides what is practicable and reasonably safe.

The Act also lists 22 diseases, now raised to 34 since July 1984, as notifiable diseases. The diagnosis of a notifiable disease has to be reported to the concerned authority who must ideally act immediately. However, the act provides only for curative measures. The worker has to wait till he actually and indisputably contracts a disease, which at times may even be fatal. Nothing can be done if merely symptoms of the disease, howsoever strong, are observed. Again numerous diseases, like skin diseases are excluded from the schedule of notifiable diseases. Problems like strain, backache and the like are not taken into account as they are not considered to be serious occupational hazards.

Furthermore, the State Governments are invested under Section 90 of the Factories Act, with wide powers to direct an enquiry into any case where a notificable disease has been or is suspected to have been contracted in a factory and "may, if it thinks fit, publish, this report or extracts from it." These powers have rarely been exercised and when they have, the Government taking advantage of the 'may' in the provision, has "thought it fit" to let such reports gather dust on shelves.

Thus due to the way the law is structured and the ineffective structure existing for its implementation, it remains a toothless monster, guaranteeing little or no protection to a worker's health and safety.

The Workman's Compensation Act. 1923: This Act is designed to provide compensation for OA's and OD'S.

That labour power in a capitalist society is a commodity is most sharply evident in the Workmen's Compensation Act. A table in the act stipulates a measured sum of money to be paid for various injuries. The human body is clinically divided into various organs and sections of organs and predetermined amount is provided as compensation for the loss of each section (See. Table VIII).

This may appear to be a detailed and minute synthetic analysis of the loss of earning capacity of a workman But this analysis indicates a totally dehumanising and utilitarian approch towards the workman. Each small tip and portion of his body is valued purely in monetary terms. Each part of his body contributes a stipulated amount to his earning which was to be equally compensated if he loses that part. The worker is thus viewed not as a human being but as a factor of production. In the event of an accident, which ideally should never occur, the employer must be compelled to provide alternate employment to the worker in additon to monetary compensation. Further the employer must be made penally liable for every accident that occurs. But above all there must be a stringent enforcement of safety norms. These suggestions arise from the content and manner in which the Workman's Compensation Act is implemented, because, under the present framework, the labour power of a worker is considered only as his means to economic survival and not as a life activity which distinguishes a human being from other living beings. Even with respect to the monetary aspect, all workers are considered together regardless of the peculiar life situation of individual workers. Monetary compensation is paid irrespective of their family needs, nature of job, promotional prospects etc.

Again a workman is entitled to compensation only if he is bedridden for a minimum of three days leaving numerous other injuries which affect the worker during the course of employment beyond the pale of this Act. The thinking behind this provision appears to suggest that a workman is injured only if he is unable to produce commodities, on the other hand, if the injury does not hamper the production of commodities, it is no injury.

Under this Act an employer is not held responsible or liable if a worker wilfully removes his personal protective equipment or any other safety mechanism provided. This is of special importance in Indian Factories, where in a few factories that provide safety equipment the equipment is often of a sub standard quality or unfit for use. It is often even found to cause further occupational hazards-for instance masks provided are often times so clumsily and badly designed that within no time of wearing them, the worker begins feeling uncomfortable or breathless.

Again the reportings of OAs and ODs for compensation under this Act is grossly short of actual occurences. In 1979, 91 cases of OD's were

reported under this Act. They were all silicosis, cases from Karnataka. Two of the 91 workers who died as a result were compensated with Rs. 8000 each, while the other 89 workers who were permanently disabled were paid Rs. 1890 each. (ILYB, 1982)

This serious under-reporting is once more indicative of the lethargy, incompetence, and inadequacy of the enforcement agency, the corrupt collusion between factory managements and the lacunae in channels for collection and compilation of data and the definition of injury in the Act.

The Employees State Insurance Act : The Act provides an employee with sickness, maternity, disability, benefits and the like. It applies to factories using power and employing 20 or more workers. Even in these factories, it covers only those employees earning less than Rs. 1000/- per month. The Act does not apply to seasonal factories and of the factories that remain, the Government is vested with the power to grant exemptions. Thus like the Factories Act, it excludes a large section of the workforce from its purview.

An Employee State Insurance Board, acting like 'the big brother', is formed under the Act. A Standing Committee and other local boards are further constituted under this. The Board consists of 40 members five of which are surprisingly worker representatives. This is comprehensible in view of the fact that they are not elected even by a farcial contest, but nominated by the Central Government. The 40 members include two medical persons as well, nominated by the Central Government; so much for an act that deals purely with medical aspects.

The Act provides for a joint contribution by the employee to be paid into a common fund. All employees governed by the ESI act must be compulsorily insured. Four types of benefits are available to them viz (1) maternity benefit, (2) disablement benefit (injury or disease in the course of employment), (3) dependants benefit (in case of death of an employee due to injury in the course of employment), and (4) medical and funeral benefit. The funeral benefit of course cannot exceed Rs. 100/-.

These benefits however cannot be availed of unless an employee has contributed for atleast 13 months to the common fund. In the event of an injury in the course of employment, occurring within 13 months, for instance, of his employment, he is not entitled to any benefits under the Act.

The Corporation is empowered to demand more money from an employer if it believes that an unhygienic factory environment or violation of health regulations is raising the incidence of ill-health to a proportion higher than what it should be. It, ofcourse, has no right to enforce the stipulated health and safety norms. Again medical benefits which are paid in cash require indisputable proof of illness. Evidence beyond a doctor's certificate is needed to establish that a worker was ill.

Also benefits under different heads cannot be claimed simultaneously. What this implies is that if a woman on maternity leave falls ill, she has to choose between the maternity benefit or the sickness benefit. She cannot encash both. Further, a worker entitled to benefits under this Act, cannot claim them under any other Act, including the Workmen's Compensation Act. Besides, prolonged illness of a worker may result in his employer dispensing with him lock, stock and barrel.

In the case of a dispute, various courts have been constituted under this Act. Red tape, nepotism and bureaucratic delays are all that the functioning of these courts offer to employees.

Finally the ESI Scheme functions with little or no infrastructure to provide even basic medical treatment. Most workers thus regard it as good for obtaining a bogus medical certificate but useless to cure any illness, let alone occupational disease. A perusal of these acts reveals that they do not even perform the role of paper tigers A bare reading of them suffices to indicate (a) that they exclude a major portion or segment of the workforce from their scope (b) Workmen are not granted sufficient rights to enforce the privileges occurring to them, (c) the privileges themselves are few and far between (d) the personnel in the enforcment department are not socially committed, nor are they technically equipped or numerically adequate to grapple with problems.

Furthermore, corruption and a management-oriented ideology that permeates the enforcement agency, prevents the rights and privileges of the workers from becoming a reality. Within the management frame of thought, a worker is perceived as a machine who must keep on functioning. In a country like India where the supply of such a 'machine' outstrips demand, the enforcement agency does not care a straw to ensure the functioning of 'the Machine' nor does it care for its breakdown.

To conclude one may assert that though the laws are far from adequate, there are certain rights and

privileges granted to a workman, which if enforced can help ameliorate their situation. The irresistable conclusion is that in a country like India the struggle for enforcement of these rights is as important as the struggle for better laws.

Let us now turn our attention to workers and management who are directly concerned with the problems of occupational health and safety.

Workers

Workers' perceptions and responses to the problem of occupational health and safety is noteworthy. Consistent with the notion that opressed groups adopt the ideological formats and practices of the oppressor, workers and unions too, have internalised Management concepts and values concerning health and safety. Health is viewed by them as the absence of disease rather than general physical fitness and well-being. It is perceived as a private issue dependent on each individual being's physiological and psychological makeup and the unique ways in which they respond to disease-causing agents like germs and microbes. The vehement emphasis by management on a worker's unsafe action as the primary cause for workplace accidents also individualises the issue of safety. Cure, within this framwork, for the injury or the malfunctioning organism is supposed to restore health. This too becomes privatised. Again health and health services are not recognized as rights but commodities whose availability depends on the individual's purchasing power. All this only serves to mask the social and political roots of health, shifting the onus of health and safety to the individual worker. Collective struggle by workers for better health and safety conditions, facilitating greater worker control over the work process and thus upsetting the balance of power between labour and capital within the overall political struggle is thus curbed.

Worker's internalisation of such a perspective cannot be merely attributed to a management conspiracy. It serves to also create for workers possibilities and guidelines for human action giving rise either to an attitude of peace and acceptance or to struggle against existing health and safety conditions. Workers response to occupational health and safety thus covers a wide spectrum ranging from stark ignorance to powerlessness, apathy, individualism and consumerism rising consciousness and a desire to struggle.

In a third world country like India, the combined effect of a dust-infested work environment together with poverty, malnutrition, insanitary living conditions, environmental pollution, alcoholism, smoking and drug-intake, brings about a synergistic effect, causing so called classical occupational disease like pneumoconiosis in coal miners and asbestos workers, byssinnosis in cotton textile workers and bagassiosis in sugar-cane crushers. A worker thus often finds it difficult to discern between ill-health caused due to poor living conditions and his occupational environment. For example, at a recent workshop on occupational health in Bombay, the comment of a socially conscious trade union activist working in a Kanpur textile mill is telling "We definitely feel uncomfortable working amidst cotton fibre and high relative humidity. Many of us have T.B., which we always assumed was due to our living in slums and poor living standards. But only after this doctor here told us of byssinossis do we know that it is the cotton fibre which is disabling us".

Again certain occupational diseases like cancer are slow and insiduous in their onset, and manifest themselves after a long time, often towards the end of the worker's career span or after he retires. He thus remains unaware of the damage done to him in the course of his work, eliminating all possibilities of struggle.

The worker is often ill-informed or ignorant of the products and materials he handles and hence unaware of the impact it is likely to have on his health. Even if he is mildly conscious that his work environment is responsible for the deterioration of his health, he lacks precise knowledge regarding the specific nature and extent of damage to his health or the medical remedies he can resort to. He thus, for instance, succumbs to milk or polyvitamin prescriptions by managements as a panacea for respiratory problems caused by inhalation of zinc fumes and dust. Due to his own backwardness or his preemption from technical and engineering know-how regarding industrial health and safety, he is not only unaware of the precise health and safety, status of his work place but also the available pollution control measures, possible safety mechanisms and safer substitute materials that management can very well introduce. He thus swallows the management bait, particularly that advocated by the chemical industry management that work hazards and pollution is inevitable and bearing with one's lot is the only alternative.

Again in the wake of unemployment and tight economic constraints, acquiring and maintaining a job is of foremost importance to a worker, regardless of health hazards at work, even if he is aware of them.

In the much exploited unorganised sector, the demand for unionisation and higher wages assumes precedence over health and safety. The fear of termination of services in the event of being declared medically unfit by the medical inspector of factories often inhibits workers from demanding medical examinations or raising health demands.

The organised and better paid workers though in a more objective position to take up health and safety issue, have by and large failed to do so. If an incentive scheme (productivity linked wage or piece rate) is under operation the workers may themselves not report minor injuries and just continue working, sometimes even without first-aid. If there are group incentives for production or even safety (award for million man-hours worked without an accident), group anxiety to acquire the bonus may pressurise the injured worker not to report the accident but to resume work as soon as possible after first-aid. Health and safety is thus preempted from being taken up as an issue.

Workers also fear plant shut-downs to rectify hazardous conditions in the work environment. This inevitably implies a loss of wages and a cut in overtime payment if any. They thus refrain from raising health and safety demands.

Finally, it is only when facilities consequent on an accident (i. e. paid special leave and compensation for disablement) are significant financially that workers make a particular effort to atleast report accidents, however small. In most companies, however, accident prevention facilities are not particularly good.

For the above reasons a number of health hazards never enter the official records of even the factory, in the first place, let alone being raised as an issue by workers.

Health and safety action has however been observed in certain dust prone chemical and engineering industries because of the high and severe incidence of diseases like asbestosis, silicosis and lead-poisoning or serious injuries and deaths resulting from work place accidents. These occurrences have shaken workers into realising the gravity of the situation and the danger to their health and lives.

The workers have resorted to an aggressive propaganda on a specific incident and the hazardous work environment through posters, pamphlets, news-items, gate-meeting and personal talks with other workers. The Unions have raised demands for medical examination of all workers, inspection and assessment of work environment and the right to obtain medical and factory assessment reports. Pressure has also been put on the management to control pollution and provide workers with personal protective epuipment like respirators, masks, goggles, gloves, overalls and safety boots. Safety guards and fencing for machines have also been demanded. Workers have also pressurised the management to set up a Safety division and safety committees within the factory. Even in these industries where health and safety has been taken up as a struggle issue, it has often been translated into a monetary demand in the form of compensation or a hazard allowance. It is interesting to observe that workers in an engineering industry did not use the gloves and protective equipment provided. They sold good quality protective footwear or wore it out of the work environment. Safety guards were removed from machines to complete production quotas in shorter periods and escape from work place. This is symptomatic of the discomfort caused by protective equipment through the long hours of work, lack of adequate awareness regarding safety, habituation to sparse clothing and working in slippers, the prestige and status of using shoes out of work, and an alienation, monotomy and boredom which preempts getting away from work as soon as possible even at the risk of one's safety.

Workers and their unions are thus permeated by the corporate culture. They are steeped in individualism, economism, consumerism and bureaucracy. Workers and their unions perceive man as an 'economic man' rather than envisaging the total intellectual, emotional, political and socio-cultural development of the human being. They have also internalised management attitudes and values to health and safety. This coupled with the deteriorating economic situation has prompted unions into preoccupation with day to day problems of workers like wages, leave, reinstatement and the like. Traditional unions have failed to take stock of technological and work process changes that bring in their train new problems and open up new areas of demands. Even if unions are aware of this, a leap from economic demands to health and safety issues would involve demands like change in plant outlay, use of substitute products, installation of safety devices and pollution control equipment. This would mean a greater control over the labour process, essentially a political demand which managements would fight tooth and nail, against

unions who would refrain from stamping too hard on management's toes. Defeat on such demands or neglect of every day problems of workers who have not yet perceived health and safety as an issue could mean loss of workers support or loosing out to a rival union Unions would refrain from this risk.

Health and safety action therefore wherever initiated has been sporadic and timely, coinciding with the occurrence of the catastrophe and petering out with the meeting of demands. It has not yet become a consistent and cohesive class-based movemement.

Management

Management's response to the problem of occupational health and safety is broadly governed by cost considerations and the strength of the union. Action has spanned from flagrant abuse of health and safety stipulations of the Factories Act, collusion with officials to punitive measures against workers, to sophisticated ideological and institutional co-optation, to progressive measures which work in the interests of management and appease workers.

Non-registration of factories, failure to submit returns and records to the factory inspectorate, flouting of TLV limits for dust, toxic chemicals, and physical agents, absence of appropriate pollution control measures, use of hazardous materials and obsolete machines, non-provision or provision of substandard personal protective equipment, absence of safety guards and fencing for machines, lack of proper canteen, sanitation and clean drinking water facilities, poor plant layout and bad housekeeping, absence of periodical medical check-ups for workers or regular inspection of factories are but a few open transgressions of the law. This is indeed effected with the active connivance of the factory inspectorate officials through personal and political favours and backdoor cash receipts.

Furthermore, management withholds from workers information regarding the process of production, materials used in production and their effects on health, number of accidents, hazardous locations, pollution control records, toxicity levels, investigative reports of accidents, factory assessment and medical reports and recommendations for improvements made by the factory inspectorate and government agencies.

Health and safety demands are often mht with management's emphasis on the inevitability of works hazards. collusion with medical personnel to give inaccurare medical reports or refrain from attributing a worker's ill health to his occupational environment is yet one more method of containing the workers. placating ignorant workers with medicaments and beverages, or monetizing the demand with a paltry compensation or hazard allowance and cash incentives for accident-free records are often resorted to by managements. Transfers, plant shutdowns, or retrenchment of workers on medical grounds after a medical examination is an oft used preventive measure. Isolationist tactics like transfer of workers, keeping worker off from the plant premises by sponsoring them for out of plant training courses in health and safety, preventing workers from entering other plants during rest intervals or lunch breaks to discuss problems on health and safety is another means employed to thwart worker initiative.

A 1976 ammedment to the Factories Act 1948, provides for the appointment of a safety officer in factories employing 1000 workers or more. In Maharashtra, out of 224 undertakings required to appoint safety officers, only 97 officers have been appointed to date. This ammendment has brought about a shift in management perspective by incorporating safety in to the structure of the Corporation, thus avoiding too much interaction with outside authorities.

The safety departments which by and large consist of safety officers, assistant safety officers, assistant safety engineers, and other safety assistants are empowered to receive accident reports, investigate causes for accidents and prescribe corrective action. Often these departments lack sufficient and competent personnel. Although the inspection rounds and the issuing out of safety equipment are by and large the only occassions for contact with the workers, safety officers are often prevented from going to the shop floor and communicating with workers. They rarely record workers' complaints during their infrequent rounds. Nor do they investigate specific complaints of workers and unions.

Reporting of accidents occurs in two phases. The first is from the worker and his supervisor to the management. The second is the reporting of the accident by the factory to the FI and the ESIS. Suppression of reports takes place at both levels as we shall see.

When a worker is injured within the factory, he gets first aid from the dispensary or the first aid centre on the premises. A written report of the

accident is sent to the authority in the factory assigned the task of collecting reports i.e. fire office, personnel or Safety department where it exists.

Certain non-external injuries like back-aches or sprains may not even be complained of by the worker, and even when he obtains first-aid and fills up a report, this may not be accepted, the authorities questioning the existence of the injury as well as whether it happened at work. Where the injury is minor supervisors may not allow the workers to leave the shop. The supervisor may even refrain from reporting an accident if he is likely to be hauled up. Often first-aid may be provided in the shop and the worker asked to continue his work. In all such cases accidents are not even reported and hence not recorded. Incentive schemes, group incentives for production and safety may often prevent a worker from reporting injuries. Though in most companies accident benefits are rare, the existence of these may prompt reporting. A number of work place accidents, therefore, never enter official factory records.

On the next stage too, i. e. reporting of accidents to the Factory Inspector and ESI, there is suppression of reports, both by just not reporting certain cases, as well as by toning down the seriousness of the injury or the event, thus falsifying the report. This happens because managements are keen not to have absenteeism, to avoid payment for compensation as well as avoid prosecutions for negligence under various acts; or for even more prosaic reasons like keeping down accident rates to win national or international awards for safety performance. In the absence of statutory rights of workers to report accidents, as well as the non-submission of annual returns by managements, reportage of accidents and hence prosecutions on the same are unheard of. If the Factory Inspector is aware of the occurence of accidents more aften than not he is silenced with bribes of various kinds.

Then at the time of compilation of the OA statistics, only 'reportable' accidents (these resulting in more than 2 days disablement) are included and according to figures for one engineering company, only about 1 accident in 10 is "reportable". Thus millions of minor nicks and cuts, burns, foreign particles in eye, lumps and sprains, with less than 2 days disablement, though reported in the factory go unrecorded in the official statistics.

There is an an even more severe under-reporting of diseases as compared to accidents, the causes lying both in the detection and diagnosis of causes. Accident injuries are directly perceptible and their existence cannot be denied. Secondly, their instantaneous occurrence clearly ascertains the cause and effect relationship between accident injuries and work. On the other hand, diseases are usually systematic malfunctioning, detection of which is time-consuming, the existence of which can be doubted. Since they are slow acting, the occupational origin of a disease, or when this is accepted, its link with a particular work place can easily be denied. Government authorities point out lack of expertise as a cause. This again has its origin in the lack of emphasis on study of diagnosis and treatment of OD in medical education, and in that most doctors, in any case, lack clinical experience of detection of such cases.

As regards reporting of cases to the FI, the responsibility lies with the factory managements and doctors. Factory managements have no interest in detecting OD's and would be keen that such information does not reach the FI or their workers. Medical practitioners are statutorily required to report cases of occupational diseases they detect. The paltry penalty for non-compliance extending to a maximum of Rs 50/- proves no dis-incentive to any doctor, though needless to say no such penalty has ever been awarded. With those being the agencies statutorily responsible for reporting, it is no suprise that so few cases are reported.

With certain categories of medical practitioners other considerations operate. Doctors employed by factory management function in the interst of managements, and even if cases are detected these are only disclosed in confidential memo to top managements. In such case, particularly in larger companies, hazardous operations may be transferred out to the small scale sector. Other Industrial health or medical consultants are reluctant to certify any illness as occupational diseases, since this may antagonise the company involved and result in his removal from the companies approved panel of doctors and consequent loss of business.

The example of Rashtriya Chemical Fertilizers (RCF) a Public Sector Chemical concern, for instance, raises questions on 'management-medical collusion'. A medical exmination in 1983, of 113 of workers of the nitric Acid plant by Dr. S R, Kamat, chest disease expert of KEM Hospital, revealed that 51% of these workers had severe basal scars on their lungs. Dr. Kamat attributed this probably to the occupational environment. A subsequent examin-

nation of more than 600 workers from different plants in the RCF by Dr. Kothari of Bombay Hospital (Rao and Kothari) 1984 showed that only 10 workers had damaged lungs. There was no trace of carboxyhaemoglobin and methaemoglobin in the blood samples and strangely the damage to the 10 workers was attributed due to smoking. This is in glaring contradiction to the previous report. Further Dr. Kothari was a person of management's choice, the latter having succeeded in circumventing the union's demand of a medical panel chosen by both workers and management.

Safety Programmes of the Safety Department

The safety programmes initiated by the Safety Department stress on unsafe worker action as the cause of accidents. Worker carelessness, lack of precaution, and dare-devil tactics attributed do workers are said to be the root to accident causation. In view of raising safety consciousness, safety schemes for workers are actively advocated, thus absolving industry of blame and responsibility and averting demands for workers control over the work process.

While normal medium sized managements resort to minium compliance with the law, if they cannot bribe the factory inspector, the larger more progressive management, particularly in chemical, petro chemical and engineering industries, are more sensitive to health and safety issues as precautionary measures. The primary focus is on the safety of equipment in order to avoid losses that can accrue from accidents. Expert personnel and agencies may even be invited by management to undertake research studies on the health and safety conditions in the plant and make suggestions for improvement. The reports however remain the management's private property. Competing trends in industry to have accident free records and thus merit national safety council awards are another motivation to improve health and safety conditions.

It must however be noted, that though technical solutions like fencing of machinery and fitting of guards is resorted to with swiftness, basic restructuring of the work environment and work processes is rarely done from the safety point of view. In the final analysis health and safety action by Maganement is undertaken at management's pace, under management initiative and control, with professional management appointed presonnel on the job thus smothering worker initiative at every stage.

Thus tens of thousands of workers are injured in work place accidents. Several more suffer from occupational diseases and keep dying, while no one bothers to notice.

Conclusion

It is thus necessary for unions to begin questioning their management-oriented conceptions of occupational health and safety and begin to clearly locate the roots of occupational diseases and accidents, link with pro-worker specialists and institutions/centres on health and safety in India and abroad as well as workers in other industries in India or abroad must be created. This will help the acquisition of information with respect to one's own industry as well as other industries. It also helps build support structures and co-ordination between workers of various industries prior to and during a struggle. Furthermore, a struggle for stringent implementation of the laws needs to be made. The demand for a comprehensive law speciffically relating to health and safety may also be raised. The law must be changed to involve workers and their unions in the process of detection and reporting and providing direct access from them to the factory inspectorate and other public agencies and institutions concerned with occupational health and safety. It is necessary for workers to demand formally created channels in their unions to monitor accidents and ill health at work and demands for personal protective equipment, safety mechanisms or even basic restructuring of the work process may be raised (whenever and wherever possible).

Finally, it must be stated that a meaningful change can only come about through a revoluionary transformation of the capitalist social order and the constitution of a 'genuine workers' "State" that will ensure safe working conditions and a disease-free work environment. the formation of such a state is however a long term goal, the movement towards which can in part be initiated by certain concrete short term actions on health and safety here and now. This can become the the springboard for a consistent and consistent and consolidated health and safety movement in India within the framework of a generalised revolutionary struggle for health and safety.

(See tables overleaf)

TABLE I

Year	No. of industrial injuries	No. of Fatal accidents
1976	300 319	831
1977	316,273	690
1978	347,016	776
1979	316,481	852
1980	356,341	806
1981	390,783	843
Annual Average during this period	337,869	799

Source : Indian Labour Yearbook 1977-81.

TABLE II

	Total for period 1976-1981	Annual Average
MINES		
Fatal	1686	281
Serious	16936	2823
RAILWAY		
Fatal	1823	304
Non-Fatal	155041	25840
PORTS & DOCKS		
Fatal	124	21
Non-Fatal	10397	1733
TOTAL		
Fatal		606
Non-Fatal		30396

Source : ILYB 1977-81; PBLS 1982-83

TABLE III

Cases of Occupational Diseases Reported Under the Factories Act, 1948 for the years 1960 - 1980

Year	No. of cases	Year	No. of cases	Year	No. of cases	Year	No. of cases
1980	32	1975	27	1970	42	1964	17
1979	12	1974	19	1969	38	1963	30
1978	19	1973	14	1968	22	1962	76
1977	23	1972	17	1967	37	1961	106
1976	12	1971	3	1966	50	1960	38
				1965	5		

Compiled from Indian Labour Book, 1967-1982, figures being obtained from reports of Factory Inspectorates of the States.

Table IV

Cases of Occupational Diseases Reported Under the Factories Act, 1948 During the years 1976-1980

Name of disease	NAME OF STATE								
	Maha	Punj	Hary	Karn	Bihar	Rajas	West Beng	Oris	TOTAL
1. Chrome Ulceration/ Poisoning	—	22	3	—	—	—	2	—	27
2. Silicosis	1	—	—	13	—	—	—	1	15
3. Halogen Poisoning	11	—	—	—	—	4	—	—	15
4. Benzene Poisoning	12	—	2	—	—	—	—	—	14
5. Lead Poisoning	—	—	—	—	10	—	—	—	10
6. Toxic Jaundice	—	1	4	—	—	—	—	—	5
7. Toxic Anaemia	—	—	4	—	—	—	—	—	4
8. Dermatitis	—	—	2	—	—	—	2	—	4
9. Phosphorus Poisoning	2	—	—	—	—	—	—	—	2
10. Asbestosis	1	—	—	—	—	—	—	—	1
11. Nitrous Poisoning	1	—	—	—	—	—	—	—	1
Total	28	23	15	13	10	4	4	1	98

Compiled from Indian Labour Year Books for the years 1977 to 1982, published by Labour Bureau, Simla.

Table V

Cases of Occupational Diseases Reported Under The Workmen's Compensation Act, 1923 for the years 1966-1979

Year	Temporary Disabillity	Permanent Disability	Deaths	Total No. of cases	States form which reports
1979	—	89	2	91	Kar
1978	—	86	2	88	Kar-84; AP
1977	—	NA	NA	102	Kar
1976	NA	NA	NA	107	Kar
1975	—	—	91	91	Kar
1974	—	—	96	96	Kar
1973	—	—	33	33	Kar
1972	—	—	34	34	Kar
1971	—	10	14	24	Kar; MP; AP
1970	51	59	13	73	Kar; AP; MP; Ker
1969	10	67	14	91	Kar; AP; Ori
1968	1	84	4	89	Kar; AP
1967	NA	NA	NA	125	Kar; AP
1966	NA	NA	NA	115	Kar; AP

Compiled from Indian Labour Year Books 1967-1982

Kar : Karnataka; AP : Andhra Pradesh; MP : Madhya Pradesh; Ker : Kerala; Ori : Orissa.

Table VI

Estimates of Incidence of Occupational Disease based on Sample Studies

Disease	Occupation	Year	Sample Size	Percentage affected	Size of Workforce (for this industry nationally)	Estimate of Disease
Silicosis	Potteries	1953	808	16	23,060	1845
Silicosis	Foundries	1970	464	33	66,000	10560
Byssinosis	Cotton Textiles	1976 (ICMR)	899	14-Carding 10-Spinning 11-Weaving	743 630	37181
		1967	1989	7.8		
Asbestosis	Asbestos	1981 (CLI)	900	6.5 (p) 30.0 (P)	8,210	258 1231
Lead Poisoning	Storage Batteries	1981 (CLI)	363	9.1	11,230	511
Silicosis	Slate Pencil	1979	151	57		
Carbon Disulphide poisoning	Rayon	1958	270	27		
Silicosis	Gold mining	1947	7655	43.8		
Pneumoconiosis	Coal mining	1961	950	19		
Manganese poisoning	Ferro-manganese manuf.	1961	179	24		
Chrome Ulceration on skin	Dichromate Manufacture	1963	631	20		

(D) : Definite Asbestosis (P) : Possible Asbestosis

Data on Sample studies from Indian Jorurnal of Occupational Health and Central Labour Institute, Bombay.

Table VII

Prosecutions under the Factories Act for the year 1979

Type of conviction	No. of Convictions	Percentage
1) Non-compliance with Provisions of Notices, Registers and returns.	4679	31.4
2) Convictions for long hours of work and employment of women in hazardous occupations.	2133	14.3
3) Violation of Health and safety provisions.	2090	14.0
4) Violation of health, sanitary and welfare Provisions.	1617	10.8
5) Others	4383	29.5
6) All convictions	14902	100.00

Source : Compiled from Indian Labour Year Book, 1982

Table VIII

	Description of Injury	Percentage of loss of earning capacity.
1.	Loss of thumb	30
2.	Loss of thumb and its metacarpal bone.	40
3.	Amputation from 20.32 cms from tip of acroman to less than 11.43 cms. below tip of olecranon.	70
4.	Amputation below hip with stump not exceeding 12.70 cms. in length measured from tip of great trechanter.	80
5.	Crullotine loss of tip of middle finger without loss of bone	4

Source : Workmen's Compersation Act, 1923

Notes

1. It is assumed that there are 300 working days to the year. For this period on an average 8 persons died every 3 days. The number of deaths in Maharashtra and Uttar Pradesh respectively over these 6 years is 866 and 639.
2. For all fatalities i.e. 1405 per year, works out to average of 14 deaths every 3 days.
3. The large number of cases in Karnataka are those of silicosis from the gold mines at Kolar gold fields, where studies as early as 1947 showed a high incidence (44%) of workers affected by silicosis. The fact that a large number of cases are reported and compensated shows how widespread the disease is, as well as indicates an active workers' organisation and a functioning occupational health faculty. Further investigation is called for.
4. Estimate of this for this industry nationally = Workers employed in this industry x 0.5 x % of workers affected in sample study ÷ 100.

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HAZARDS OF AGRICULTURAL WORK

A Case Study from Punjab

peoples health group

Hazards of agricultural work are not only a consequence of the intervention of modern technology, such as machinery and chemicals. More importantly, they may be traced to the prevalent exploitative mode of production and class relations. Agricultural workers encounter a wide range of health hazards — injuries due to farm machinery, fertiliser and pesticide poisoning, animal bites, electric shocks and others. This is a report of an analysis of thresher accidents recorded in one hospital in Punjab. Overwork, defective machinery, drug addiction and other such factors are also considered.

From time immemorial the issue of health and disease has been vitally linked with the total human environment (physical, biological and socio-political). This link is as important today, as it ever was. Shortcomings in the different aspects of environment give rise to specific disease patterns.

In a country like ours, most of the diseases are the result of the interaction of poor quality of nutrition, clothing, housing, water-supply, excreta disposal, working conditions, transport facilities, environment and socio-psychological interactions.

In all these aspects of life, which are vital for the health of the people, the issue of class is almost always involved directly or indirectly. The most exploited and poor classes in a stratified society like ours, are the worst victims of the various aspects of pathogenic environment. The diseases produced by various aspects of the disease-producing environment are further interlinked with each other. The diseases created by one aspect of the environment influence and are influenced by the diseases produced by other aspects of the environment. The ones placed lowest in the class hierarchy are the worst victims of this vicious cycle. The issue of class is again central in the prevention and treatment of diseases in a stratified society. The facilites for prevention and treatment are available according to the position in the hierarchy of classes.

Environment of the work place has always played an important role in the pathogeneses of disease. Over a period of time this influence of working conditions on the issue of health and disease has enormously increased because of introduction of various advanced techniques in different fields of life including agriculture. The introduction of mechanisation, high yielding varieties of seeds and the associated use of pesticides and fertilisers has increased productivity enormously. But in the present set of socio-economic conditions, which are based on callous profit earning, these techniques have brought in new health hazards also. The benefits of these techniques being used for the so-called 'green revolution' have reached the people in direct proportion to their assets. The dispossessed i.e. the agricultural workers are least benefitted. However, they have received a maximum share of the ill effects of these developments. It must be emphasised that health hazards to which the agricultural workers are exposed are not qualitatively different from those of poor and middle peasants. The reason is very obvious. These health hazards baing connected with agricultural work affect whosoever is physically involved in the work. However given the class nature of our rural society, more the hazardous work, more the likelihood of it being done by the lowest placed classes. It must be added further that in most parts of our country agricultural workers are synonomous with harijans. Thus in the hierarchy of class and caste in our rural areas the agricultural workers/harijans are much more likely to be the victims of health hazards in agricultural work than the other relatively privileged classes/castes. Ignorance and illiteracy of the downtrodden further viciates the problem.

The various health hazards connected with agricultural work are enumerated below :

(a) Injuries connected with agricultural work particularly those caused by farm machinery.

(b) Poisoning with pesticides.

(c) Skin disorders due to the use of chemical fertilisers.

(d) Health hazards of overwork, particular postures and *drug addictions*.

(e) Bites by various poisonous animals.

(f) Electric shocks.

(g) Miscellaneous, including sun stroke, heat stroke, allergies and hook worm etc.

People involved in agricultural work are highly prone to various injuries. The cause of injury ranges from compulsion to work barefoot to the use of fast moving farm machinery. Amongst the machines which are likely to cause injury to the user the wheat thresher occupies the top position. Due to this the injuries caused by the thresher machine have been discussed in a bit of detail. In a state like Punjab, old methods of threshing of wheat have altogether been replaced by the thresher machines and combine harvesters. About 2 lac threshers are used in Punjab during each harvesting season. The number of those who get serious injuries is expected to be around 1000 each year. According to official information given in the Punjab assembly on Sept. 7, 1978, 841 cases of loss of limb or life occured during the previous three years; eight agricultural labourers were killed and 24 cases lost two or more limbs, in others one limb was affected.

Study of Thresher Accidents

People's Health Group, Punjab, has analysed the data of 48 cases of thresher injuries who came for treatment to Rajindra Hospital, Patiala, from January, 1982 to June 1984. Sixry percent of the cases were agricultural labourers while the rest 40 percent were poor and middle peasants. Out of the 28 cases of agricultural labourers 8 were from outside the state while others were Punjabis. Sixty five percent cases were young i.e. below 25 years of age (the youngest being 14 years) 20% were between 25 to 50 years of age while the rest 15% were above 50 years of age. Two cases were around 60 years of age.

Extent and Nature of Injury: Out of 48 cases, six (12.5 percent) involved lower limb injuries while in the rest 42 (87.5 percent), upper limbs were involved. In all cases of lower limb injury the amputation was below the knee. It looks strange how leg injuries could be caused by a thresher machine ? In all these cases the leg was used to push the stuck up fagot of crop when force of the hand was not enough. The strucking up may occur due to defect in the machine or putting in too much crop due to haste. Out of 42 cases in which the upper limb was involved. in 31 (73.881 percent) the limb was right while in 11 (26.19 percent) cases it was left. Amputation was below the elbow in 35 (83.33 percent) cases while it was above the elbow in 7 (16.67 percent) cases.

Causes of Thresher Accidents: None of the threshers being used had any protective device at the time of the accident. all threshers being used in the above cases were cheap models which cost about Rs. 4000/-. In all these cases ISI standards wers grossly violated. It is a known fact that only 10 percent of threshers being used in Punjab come upto the ISI standards. There is a long standing dispute between the industries department of the Punjab govt. and the Thresher Manufacturers Association. The industries departmemt insists on ISI standards while the manufacturer's association tries to bypass these standards under one excuse or the other. Many improved models of threshing machines have become available in the market but have failed to gain popularity because of the high costs. The best model of thresher costs Rs. 40,000/-. In all these improved models the chances of accident are minimal, in addition to the increase in efficiency. Even the cheapest models which were being used in the above quoted cases, can be provided with some protective measures without adding much to the cost. The only drawback of such protective measures is that it reduces efficiency to some extent. Because of this, even when provided at the time of manufacture, they are removed by the land-owners when the threshers are put to use.

Landowners have a tendency to invest least amount of money on the thresher machine because it is to be used only for a few days in a year and that too mostly by the hired labour.

In addition to this major cause of accidents i. e. the defective machines, other factors also contribute significantly-

(i) Every peasant cannot afford to buy a thresher machine alongwith motor or engine. Thus many poor farmers either hire a thesher or share it with their friends and relatives. This increases the quantum of work on each thresher. Thus generating the tendency to run it round the clock.

(ii) Most of the farmers lack space to store the grain and thus are compelled to take it straight from the fields to the market. Fearing the uncertain weather which may damage the unthreshed crops and threshed grains, the farmers have a tendency to finish the threshing work as quickly as possible.

(iii) The govt. usually puts up a time limit for the supply of electricity for threshing purposes. Thus the farmers are compelled to finish the work during that limited period which is possible only by overwork.

(iv) The agricultural workers easily surrender to do overwork because in addition to the psychological pressure of their employer they are anxious to earn for the lean months as the employment is only seasonal one.

Under these circumstances overwork is a universal phenomenon during the harvesting season which is possible only under some sort of intoxication. The most common intoxicant used in such situation is opium which is offered to the labourers by the land owners. It is a well known fact, at least in Punjab that many agricultural labourers become opium addicts during the harvesting seasons. When they become addicted they have to purchase the opium which results in economic and other related consequences affecting directly and indirectly the health of whole of the family. The other intoxicants commonly used are country made liquor, chewing and smoking of tobacoo and poppy husks etc. All these intoxicants, have a tendency of habit formation with their consequent effects. In a nutshell the combination of overwork beyond a physiological limit and intoxication make the worker prone to the accident in an unsafe machine.

In the above 48 cases which were studied by us, 55 percent cases confessed of having resorted to over work ranging from 9 to 40 hours without any rest. However, this percentage was higher 65 percent when calculated for agricultural workers alone. The use of intoxicants was recorded in only 10% of the cases. This was in contrast to the observation by many of our friends who are directly related to agricultural work. The person dealing with such cases in Rajendra Hospital, Patiala told us that the fact of intoxication is usually concealed because of the fear that blame will be put on them and any possible compensation including the free treatment in the hospital may be denied.

The above facts clearly reveal that accidents are not mostly with the use of machinery rather, it is the type of class relationships and mode of production which is responsible for the high prevalence of accidents in the use of farming machinery. Very low incidence of such accidents in China is the best example to contrast backward capitalist mode of India with socialist mode of production.

Further the quality of treatment and rehabilitation will again depend on the class status of the victim because these are purchaseable commodities. Again to contrast the two modes of production, highly advanced reconstructive surgery is available in China to the workers if he or she happens to get such an injury. To think of reconstructive surgery for the Indian workers seems quite foolish. In a nutshell, the chances of having an accident and the amount of final disability depends on the class/caste of the person and the mode of production in that society.

The health hazards associated with agricultural work next to injuries is poisoning due to the use of chemicals for plant protection. In the underdeveloped capitalist countries pesticides are being used on a very large scale, both, for agricultural and public health purpose. The high yielding varieties of seeds which are being used as part of strategy of the green revolution' are highly sucesptible to diseases and to safeguard them highly poisonous chemicals are used. In India in 1983-84 the proposed consumption of various pesticides in the agricultural sector was as follows :

1)	Organochlorine compounds (D.D.T., B.H.C., and Aldrin etc.)	65,035 tonnes
2)	Organophosphorus compounds (like malathion, parathion etc.)	23,000 tonnes
3)	Carbamates	6310 tonnes
4)	Plant origin	120 tonnes
5)	Fumigants	1300 tonnes

The pesticide most commonly being used in India and other backward capitalist (BC.) countries are organochlorine and organophorus compounds which had long been banned in the Western countries where their manufacture originally started. Now, either the factories have been shifted to the BC. countries where they are being run with the collaboration of Western transnational companies or the pesticide is being exported after its manufacture. Two lac of such chemicals are being exported from the US. to the BC. countries.

A recent report of the International Development Research Centre, Ottawa, reveals that there are seven and a half lac cases of acute poisoning with various varieties of pesticides. Half of these are reported from the third world countries out of which one-third are reported from India alone. The number of deaths from poisoning are reported to be 10,000 annually in the third world out of which one-third are from India. The extent of chronic poisoning is so huge that it is very difficult to evaluate its effects. Indians have highest tissue level of DDT in the world i.e. 12.8 to 31.0 parts per million (PPM). The average DDT intake of an Indian is 0.27 mgm/day/person.

In India there is a 5% annual growth rate of pesticide consumption since 1972 with a corresponding increase in the number of cases of poisoning. The people involved in agricultural work are more likely to have acute as well as chronic poisoning than the people at large. Further out of these the agricultural workers are even more prone because the land owner who can afford to purchase pesticides, is usually not involved physically in the plant protection work. The study undertaken in five districts of Gujarat (E. P. W., 1980) also reveals this fact. Farm labourers are worst affected because majority of them are exposed for a longer period due to their continuous contact during spraying operations, and that also without any protective devices. The protective devices are almost invariably not used; firstly, because the manufacturing companies underplay the toxic effects of their product and also are disinterested in the manufacture of protective devices (As quoted in the E. P. W. study only 2 out of the 58 companies studied were manufacturing protective devices); secondly, the whole system being profit oriented and exploitative the rich farmer is not interested in spending for the safety of the agricultural worker, thirdly, because of the fact that the agricultural workers being poorly paid are unable to purchase the protective devices by themselves and lastly because of illiteracy and lack of information the extent of toxic effects are not fully known to the workers.

Very few studies have been conducted on the long term bad effects of pesticides. The Indian Toxicology Research Centre in collaboration with the neurology Department of K. G. Medical college, Lucknow, have conducted some studies. These studies revealed that one-fifth of the farm workers involved in spraying had impaired eyesight following muscular degeneration. Cases of cancer, stunted growth of their children, deformities, blindness, diseases of liver and nervous system have been identified in the cotton growing areas where the use of pesticides is more frequent. A recent study has shown that 73% of these workers had toxic manifestations including cardiovascular and intestinal problems. The agricultural workers of Karnataka, who used to eat fish and crabs from the paddy fields in which they were working and spraying pesticides, were afflicted with severe paralysis and other diseases including what is called "Handigodu Syndrome."

The study of Gujarat quoted earlier had taken the figures of poisoning cases from the civil hospitals of Vadodara and Surat. In all 70 patients of acute poisoning in three years from 1976 to 1978 were studied. All these 70 cases were agricultural workers including two women. None of these workers was provided with any protective device. The hospital admissions are a very poor index of the extent of poisoning. Firstly because all the cases don't reach the hospital, and secondly these are only of acute poisoning which is only a fraction of the total poisoning being done.

There is no legal protection to the victims of such accidents and poisoning cases. Workers Compensation Act does not include these cases under the pretext that the act is only applicable to industrial workers. None of the 48 cases which we studied turned up to obtain any certificate for the purpose of compensation. Similar was the case with the poisoning in Gujarat who were not given any sort of compensation.

We could not trace a case in our study in relation to dermatitis caused by the use of fertilisers, particularly at the time of sowing of paddy, though it is a known fact that handling of fertilizers causes skin diseases which are sometimes so severe that the worker has to abandon the contact with fertilisers.

There is a whole range of morbid conditions resulting from overwork, working in unphysiological postures, and the associated drug at use. With the introduction of mechanisation in agriculture and strengthening of its bonds with the market has increased the intensity of exploitation of labourers. The intensity of extraction of surplus labour has increased many folds which in the given set of class relationships is bound to increase the alienation of the workers because psychological alienation is in direct proportion to the extent of alienation of labour power. The usual expressions of psychological alienation i.e. psychosomatic disorders, psychological diseases, use of intoxicants and crimes etc. are bound to increase. Though no study evaluating these effects could be traced, yet one can easily feel their increasing trends. The rise in all these disorders in society, including rural, is clearly visible. Though these disorders are not confined to the agricultural workers, the total quantum of morbidity in this context is very obviously more on them than the other relatively privileged classes.

Because of the above facts combined with the changing social pattern and breaking down of old values, the use of drug intoxication is on the rise. The effect of those intoxications is bound to be worse on agricultural labourers because of their

(Contd. on page 140)

Marxist View of Health & Medicine : A Rejoinder

Bharat Patankar and Jogin Sen Gupta

In its first issue SHR rightly carries articles on historical and general perspectives. We think it is necessary to give an immediate response to the perspective which comes out in this issue of SHR (1 : 1)

In his review of *A Cultural Critique of Modern Medicine* Anant Phadke writes, "John Ehrenreich first traces the historical and political origins of the 'cultural critique' of modern medicine. Ehrenreich alleges that the political economic critique concentrates its fire on the inequitable distribution of health services, on the problems of organisation of medical care and is not much concerned with the nature of medicine itself. Ehrenreich is not entirely correct in his analysis. There are marxist analysts who analyse the political economy of health not primarily from the standpoint of distribution of medical services."

While it is true that "there are" marxist analysts who take a different approach, the point is that the vast majority of them take the viewpoint critiqued by Ehrenreich. In India, for example, we must ask, among thousands of marxist doctors, political economists and cultural workers, what sort of debates on the cultural and political aspects of medicine we have had up to now?

Howard Waitzkin's article is revealing as it purports to give a detailed and researched account, with 260 references, of marxist analyses in the field of health care covering about 150 years. It is an excellent example of Ehrenreich's claim.

Waitzkin starts from Engels' *The Condition of the Working Class in England.* In this, "the first major marxist study of health care... Engels traced such diseases...to inadequate housing, malnutrition,contaminated water supply and overcrowding .. This treatment was to have a profound effect on the emergence of social medicine." With this, he makes his views about "health" and "health care" explicit at the outset. Can causes and removal of "poverty diseases" be the central problematic of Marxism in "health care"? (Even Marx and Engels were less confused about their target - not poverty but exploitation and oppression). In developing countries, "poverty diseases" still play a huge role. But what is the situation in Waitzkin's own country and the rest of the developed world? Today, the advanced bourgeoisie and the modern state have almost eliminated "poverty diseases", as Waitzkin also observes later. Poverty, unplanned industrialisation and to an extent ecological imbalance as the causes of "ill health" are not only propagated by established sciences but are incorporated in some form or other in the legal provisions of the bourgeois states, e.g. OSHA (Occupational Safety and Health Act) in the U.S.A. But this transforming of sick slaves of capital and the state into healthy ones has not weakened the system at all; it has led to strengthening its tentacles of exploitation and control. And, did the world have to wait until Engels to learn that bad living conditions lead to many diseases? Did these start with capitalist industrialisation? These stated far earlier—from the time of the city-state-civilisations. Tribal communities were much healthier. The sanitation engineers of Mohenjodaro surely had a clear understanding, of the problem.

With such a traditionally defined view of disease, the central aspects related to health in both the "developed" and "developing" world—ecological devastation, poisoning of the environment, alienated relations between humans and nature, militarism that threatens the survival of all life, sexism and racism, large-scale cultural-psychological perversions, and destruction of human relations — are ignored completely by Waitzkin. Realisation of such factors has raised basic questions for Marxists in the "developed" world : such as, can one solve such problems simply by taking over the existing poisonous forces of production? And, given massive cultural-ideological-psychological mutilations produced by the system, can the "working class take over the state"? Also, arethese problems simply due to the capitalist mode of production, as Waitzkin's approach implies, or are they the end result of an accumulated chain of patriarchal, statist and class societies?

Waitzkin gives great emphasis to the nature of exploitation in the capitalist production process in terms of surplus value and the class structure defined by that. He takes this as Marx's approach. To do this is a very limited cognisance of the analysis of the capitalist system given by Marx himself. In *Capital* Marx deals with many other aspects like alienation/estrangement, devastation of natural resources, destruction of cycles of nature etc. The article also ignores recent studies of the

nature of the internal structures of industries and of their production including their effects. This narrow approach forces the author in to the trap of emphasising control of the means of production and poverty, which cannot lead to any alternate conception of illness and health care differing from the established concept. The most serious effect of this is the complete disregard of relation between questions of health and the oppression of women, minorities, lower castes and others. In the author's own country there are countless examples of women's groups and minority groups and alternate-psychiatry groups raising these issues. In this situation ignoring this challenge is an inexcusable mistake. For the last some years communist parties and marxists in general have been facing many difficulties in trying to deal with such issues within the framework of a narrow approach to "surplus value and class exploitation." Many marxist studies have come up which are trying to develop a new approach. But the author does not confront this issue. He talks about women at one point. "Historically, women's use of health facilities and the attitudes of medical practitioners towards women's health problems have depended largely on women's class position" (1,1) ignoring the specific oppression of women even within the working class. Some words mentioning "housewives' problems" cannot wash out this serious error. The fact is that in the USA it is not working class struggles in the economic sense that have transformed the meaning of "health", but the anti-sexist, anti-racist movements and those in the area of ecology and militarism right up to the tiny but significant issues raised by alternate psychiatry, gay and other movements that have forced us to re-examine our concept of "health".

The author's mention of his view about revolution at the end of the article expresses in a nutshell, his imprisonment in a mechanical and outdated approach towards alternate health. He writes "Gaining control of the state through a revolutionary party remains a central strategic problem for activists struggling for the advent of socialism." (1 : 1) Among other things, this conception becomes dangerous for the emergence of any perspective of alternate health. First of all, it is a serious distortion to give the reference of Lenin for this statement. Whatever may have followed the October revolution, Lenin did not have a conception of "gaining control of the state through a revolutionary party". His was a conception of *smashing* the old state and establishing *Soviet power* which was also supposed to go on withering away. This approach at least implies peoples' control and gradual decentralisation and dissolution of centralised power over the heads of the people. Such a view has very positive implications for alternate health practices in relation with the emergence of the self-management of health by the people themselves. At the same time, with the experiences of the post-revolutionary societies it is evident by now that a statist approach gives rise only to a new but still oppressive system and maintains the powerlessness of the working masses. At one point the author touches the problem briefly where he disusses the USSR in relation to the class position of medical professionals. But mainly he poses increasing state management of health as a progressive development by showing how capitalists oppose it or how private practice interests still manage to exploit it. This cannot explain the existence of severe health problems for the mass of the population in countries like India where the state sector is predominant in health, or even in the Soviet Union, China and other such countries where frightening things like devastating ecological imbalances, the masses spread of alcoholism and so on, continue to occur.

The party-controlled state and the conception of revolution which emerges out of the concrete practices of post-revolutionary societies can create nothing but a society in which health-related major ecologjcal problems of capitalist industrialisation and agricultural production continue to exist. It cannot create a health system which is not alienated from peoples' creativity and the natural balances between humans and nature. Of course, from Waitzkin's view of health care specialist doctors plan rationally, the state implements it. If health is lack of some illnesses and mortality/morbidity rates are the indicator, there seems to be no problem. But in our conception, illness and health care are a mode in the relation between people. This can be liberative or oppressive. Liberative, when it is an aspect of a movement against distortions of our mind and for social liberation. Health work can grow in terms of increased mutual and community care when it becomes a means of building up the solidarity, humanity and autonomy of people in communities, with technology and specialised knowledge shaped by and helping the control of these processes. Conversely, the state may soak up this possibility of mutual help and self-management and strengthen the top-down, specialist apparatus and power over the people. Such a way strengthens the mode of life based on "Give power to the leadership/state and they will look after you." Waitzkin misses the fact that the more "efficiently"

and "successfully" this mode functions, in reducing mortality and morbidity, the more is its success in empowering the state at the cost of the people.

Illusions created by the "public-private contradiction" have made many communist parties and otaer marxists think that the growth of the state sector is something progressive and going nearer to socialism. But the *health system* will not radically change to become a liberative process if the new arrangement only subtracts the bourgeoisie and replaces it with experts and bureaucrats while organising a better distribution of the existing type of facilities. We have to break from the prevalent concept of health forced upon us by centuries of the health establishment and society — and to understand a health system as itself a process of liberation.

Finally, after defining the "central strategic problem for activists," Waitzkin concludes by describing what they are doing. But this can be extremely misleading, for of the three trends he more or less classifies as those advocating a "vanguard party", a "mass party" or "counterhegemonic" work, only a very small minority hold the mechanical view of taking control of the state which he puts forward in the article. To say that "Party building is now taking place throughout the United States (1.1.)" is an inaccurate, to say it most kindly, depiction of the innumerable mass movements the US has seen.

If we look back at Waitzkin's own bibliography of 260 references, there is hardly any marxist critique of health before 1970 in the USA. The reason seems to be that it was the struggles of blacks, women youth and others that transformed the earlier sterile attitudes towards health and stirred them up. It is sad that Waitzkin, instead of starting from the reality of the movements, reverses this process by trying to fit the creative activism of the people into the "work of Party builders" and into such an authoritarian and narrow concept of Marxism. In the end, his type of "marxist view" raises the question, what was Marx's view? Marx vigorously supported movements against exploitation and oppression and tried to learn from them. In his openness to learn from rebellions he was ready to throw away much of his earlier views. This, and not narrow theoretical preconceptions, we think, should be the "marxist view."

Need for Analtyical Rigour

Imrana Quadeer

SHR's effort to provide a platform for discussions and interaction between activists in the field of health and its focus on the process of distilling the truth from various trends within the marxist movement is most welcome. However, the fact that health and medicine cannot be separated from the problems of the wider social order, underlines the dilemma that no serious analysts of health and medicine in India can afford to take for granted the issues within this wider social order. A theory of health and medicine is not possible in isolation. Those who try to build such a theory would be required to develop an analysis of society as well. SHR has circumvented the problem by leaving this task to other forums and have presumed that readers will either know the debates on these issues or will accept the views that contributors present. An easy way out perhaps, but not one that is conducive to constructive debate on either the specific theory of radical health action or general theory of radical political action. For example, when we talk of "political economy of health", "articulation of medicine within a mode of production" or "class structure in health system" without specifying our understanding of the terms used, we not only fail to communicate but often create confusion.

It seems to me that a debate concentrating on health and medicine alone, however rigorous, tends to treat these generel concepts superficially. Thereby, hampering the very purpose that it set for itself, that is, understanding the relationship between health and society. I would plead therefore, that even if SHR is interested in a very restricted readership of the aware converts, it still needs to handle the wider social system with much greater rigour. However, if SHR is interested in a readership, of doctors and other health workers who were attracted to marxism because in it we found a better approach to handle our own contradictions and for relating ourselves to the wider society, then SHR's policy becomes a major handicap. For us, the study of health, medicine and health services in India has not only been instrumental in deciding our professional roles but it is also a tool for understanding the society we live in. SHR does not seem to be interested in that window.

I would infact argue that this neglect leads SHR into an uncritical acceptance of certain general formulations which might sound very radical but which do not stand the test of scrutiny. The mere quantum of the so-called marxist analysis of health, done in the west has so impressed us that we have literally lifted their formulations and transplanted them on the Indian scene, without even thinking whether they are applicable. Further, in our hurry to fill in the gaps in our knowledge, we have concentrated on theory of health and medicine. That theory however, has been sought by filling the accepted theoretical constructs with Indian data and developments rather than beginning with health and health services itself to test the assumptions as well as the theoretical constructs. Such an approach creates many conceptual and merhodological problems. Another weakness has been our definitions and terms and the lack of empirical analysis and date base.

Let me take the first issue of SHR to illustrate my points. I would treat. Amar and Padma's[1] as the central paper and touch upon others when needed.

The Use of Concepts

An important assumption of the analytical framework is that mode of production in a society determines directly its health care as well as patterns of illness but it has never been proved and often negated. According to the authors, the socioeconomic structure even after independence remained more or less intact, the bourgeoisie dominated the scene and till today capitalism remains the dominant mode of production. If that be so, then there should be no change in the basic pattern of modern medicine. The authors in fact demonstrate to the contrary that there has been a major shift from "scientific medicine" to "community medicine." Furthermore, it is argued that the major factor which influenced changes in health care were the notion of welfare state, planned development, pressures of world capital class conflicts and project optimisation. It appears then that :

(a) the period covered in the main article is not sufficient to use the analytical category of mode of production.

(b) within a mode of production also, patterns of health care may vary depending upon the prevailing social relations.

The other theoretical construct that is assumed as proven and asserted vigorously to make a point instead of empirical data, is the concept of health as labour power. On this is based the understanding that input in health care by the state has an economic basis because it is necessary in the creation of surplus value. Even the fact that in India 90 percent of the industries belong to the unorganised sectors whose workers are provided no facilities for health care, agricultural producers who contribute 45-50 percent to the GNP have little access to health services and the existing health care facilities of the country are utilised by the elite and the middle class not the labouring classes has not provoked us. Could it be that the existence of a large reserve of surplus labour and the nature of technology combined with organisational forms like "contract labour" and "casual labour" devalue this concept in the Indian setting ?

Related to this question is yet another formulation which needs to be looked into and that is "commodification of health care in capitalism". The authors argue, "it is immaterial whether the surplus value is realised directly through the productive activities in the clinic and hospitals owned by the capitalist or indirectly through the provision of services by the state ....". In either case, the maintenance of productive capacity of labour is central in the creation of surplus value. It is assumed then that in commodity "health service", the surplus is not generated in the process of commodity production but outside it ! A strange view of Marx's "surplus value". The confusion has perhaps arisen because we do not make the distinction between the 'service' and 'material' outputs (like drugs, instruments, equipment etc) of the health industry. The later like any other commodity, generates surplus value and therefore profits. In the service component of the output, things are quite different. The surplus in clinics and hospitals or any other medical care institution comes from the exploitation of the health workers who are paid wages. They are paid for their subsistence (socially determined) whether they are in a private hospital or a public hospital. It is this that must be understood to appreciate why in capitalism, welfare is not an economic proposition. The services though in the name of the poor and the labouring go to the unproductive sections of population and hence in reality, there is relatively little investment in the labour power of the industrial or agricultural workers. At the same time the socially determined subsistence for doctors — the pillars of health services — are undesirably high.

It must also be realised that a practitioner even in a capitalist formation continues to provide service (commodity) without creating any surplus value for he is charging for his hours of labour and not

his subsistence. That is why a private practitioner earns even more than a doctor who is paid wages even though he may be of the same status. It appears then that the production of surplus value is not as intimately associated with profits in the provision of health services as it is assumed. Hence the economic reason for the state to run health services becomes less tenable.

Yet another formulation that needs to be corrected is that "modern medicine and hospital systems reproduce the social structure of bourgeois society." I would think that the two may replicate or mirror bourgeois relations or structures but can not reproduce it. If they could, then, the sheer presence of hospitals and modern medicine in Russia, China, Cuba, and Vietnam would be a threat to their present social systems. A proposition which is just as ridiculous as it sounds. Also in Dalli Rajhara, the hospital workers would not be able to practice modern medicine and at the same time attempt to evolve a new set of social relations. In other words there is a need to realise that a system based on division of labour and controlled by a collective is different from one where division of labour as well as ownership is a function of class.

Need for analytical rigour

The above discussion brings us to the question of class analysis and its relevance for the understanding of "political economy of health.' At this point I would not go into the question what this term denotes but assume that the effort is to see how class configurations influence patterns of health care. To approach this question, the authours go in great details of the industrial and agricultural growth pattern and the emergence of various classes. In tracing the evolution of the peasantry though, no mention is made of the rich peasants' role in the green revolution areas as well as those where green revolution did not happen. We are told that the marginal and small peasants did well in both these areas. This is unconvincing as it neither explains the increasing numbers below the poverty line since 50's nor does it explain the process of proletarianisation and pauperisation of the peasantry. Secondly, though the emergence of these classes is traced, the differences in health needs of these classes are never discussed. We are at a loss then to see if that too played any role in shaping the health services. Thirdly, in their attempt to establish causalty between health service development and changing balance of class alliances and class conflicts, they make some weak propositions and offer scant data to substantiate their arguments.

(i) It is argued that bourgeois radicalism "can best be viewed as concessions gained by working class militancy". Hence all expansion in services is projected as a result of protest and struggle. We therefore fail to make the crucial distinction between a conscious demand (or protest) for health and socio-economic unrest or instability which is often appeased by offers of bonuses and concessions in welfare services. In the former the ruling classes are forced to give in, in the latter they provide health services by choice and refuse what is really needed. Apart from this strategy of appeasment, the ruling classes also provide services because of their own direct interests economic, political, ideological [2] and physical. Also they use both preventive and curative services not just curative as the authors tend to believe. It is then necessary that to establish that expansion of services ("implementation of various reports") was a result of struggle, we locate those struggles specifically and show that provision of health services was one of their demands.

(ii) In their analysis of the 70s, they say that the emphasis on rural inputs and family planning was an attempt to postpone 'the crisis'. Without identifying the full nature of the crisis (a part of which was industrial stagnation) they further argue that the rationale of the Indian bourgeoisie in adopting a massive family planning (FP) drive was a means of controlling labour supply to suit the expansion of more capital intensive modern industries. Firstly how a capital intensive expansion of industry can be possible when there is a glut and how is it going to remove industrial stagnation or the crisis is not indicated. Secondly, despite the fact that they mention expanding numbers of unemployed people, increasing population and imperialist pressure as factors influencing acceptance of F.P.P, why they consider "controlling labour supply as "the rationale" of the bourgeoise" is never clarified.

The questions regarding the nature and resolution of the crisis can only be answered by taking up the nature of the state and the problems of surplus accumulation in India. I will not go into them, but to analyse the rationale of F.P.P. we should have certainly made some efforts. The facts are,

a) that the emphasis on F.P.P. came in the 3rd plan itself when the investments in F.P rose from 30 million to 26.97 million rupees.

b) that though it is true that in 70's the population growth rate was high, it is not adequate to

say that "the population went on rising, hence the labour force continued to expand". The rates of expansion of these two are not equal. Since the labour force increases only by new enterants into it (young people) who were born at least 10 years back. Therefore, labour force increases at a rate which is equal to growth rates of population 10 years back which in our case was much lower (22.2 in, 70s, 18.9 in, 60s and 12.5 in, 50s).

It appears then that the control of numbers of labour force alone could not be the main rationale for accepting the F.P.P One expected that instead of treating F.P.P as a welfare programme, its real nature would be exposed (where compulsion and force made their appearance as early as 1966-67). and its class orientation made explicit. F.P-P neither came as a concession to the growing political clout of the middle farmers nor it ever lost its ideological value for the classes for which it was meant. That is why it still survives in almost the same form as it did a decade ago.

(iii) Throughout it is argued that the model of 'scientific" medicine (with all its social relations and economic possibilities) was suited to the Indian bourgeoisie, and therefore it expanded. The working class continued to extract more and more through its struggles (or so we would like to believe) and the rise of the peasantry created additional pressures Suddenly however, we are told that by the second half of the, 70s this specific model, "no longer performed either this ideological role or achieved their socio-political objectives". In fact, "it was no longer a good economic option". Hence a shift in strategy by the bourgeoisie from "scientific" medicine to "community" medicine. Why all of a sudden welfarism lost its value why health services started eating into the surplus and why they no longer performed their legitimising role, are questions left unanswered.

I suspect that the idea of failure of the western model is located in our minds and is strengthened by the "radical bourgeois documents" which are forever crying their hearts out. Our susceptibility leads us into accepting their logic rather than exploring the truth. Let us answer the following questions. For which classes, hospitals and the PHC complex are no more the answers to their health problem? Even when they get nothing out of the government health institutions, do they not go to the private clinics of the same doctors for better scientific medicine? Given the choice will people prefer a community health worker or a doctor? The answers tell us that in India as yet, modern medicine faces no crisis. The crisis is of the bourgeoisie, who even if they wanted, can not provide it to the people and therefore must create blinkers. The authors have themselves shown that the present policy paper is nothing but an effort at streamlining health services in a way that the old model remains its core and is assisted by the so called "community medicine" component to create profits, provide political legitimisation an ideological domination. Secondly, the argument that "there had not been any large scale improvements in health indicators in the past years" is also not adequate to locate the crisis of health care in late 70s. These indicators are neither indicative of health status of classes nor do they show overall worsening (death rates for '50s, 60s &' 70s were 22.8, 19.0 and 14.8).

While Amar and Padma make one think about all these questions, Waitzkin in his article creates much confusion on the very subject of class analysis of medicine. Having located the structural source of exploitation in the process of surplus production, he introduces the notion of "persistence or reappearance of class structure usually based on expertise and professionalism in countries where social revolutions have taken place", without, even going into the definition of 'class' used by Bettelheim and Ehrenreich. At the same time he takes great pains to tell us about Alford's research which talks of "interest group" analysis without any comments on the value of this analytical category vis-a-vis 'classes' understood by marxists.

Waitzkin not only indulges in such 'innocent" confusions but also misleads. For example, he introduces the concept of "social imperialism of the USSR" and attributes it to Navarro who in fact though critical of the "party domination" and "managerialism" in Soviet Union, has never used this concept. In the book quoted by Waitzkin, Navarro has actually argued against the theory of convergence and criticised those Western scholars who project managers, administrators, and technocrats as a "new class" of controllers of the system. He underlines the fact that supermacy of the political party over these groups is distinct in the Russian society.

Need for better empirical basis

Yet another methodological point that needs to be repeated is the need to validate arguments and proposition. The practice of making conjectures which are not substantiated must be avoided at all

costs. For example, when we say that "by the 60 s increasing urbanisation with a 40 percent increase of urban population, inadequate housing and living conditions, low availability of food and impoverishment and unemployment has pushed up disease incidence, "we have neither data nor logic on our side. Disease incidence rates or morbidity data for the country simply don't exist and logic says that if people are migrating from villages to urban areas they must have good reason to do so. Will they move from better into the worse ? Similarly, whie talking of the early '50s, it is said, "recent series of famine and draught, increased exploitation of wars, further deterioration of the abysmal public health services the post partition exodus had resulted in a labour force which obviously could not contribute its best in terms of productivity". Here again the emphasis on health which seems so obvious to the authors, is never really validated. Unless we explore all the factors which were responsible for the disruption of industrial production or for its low performance, (investments, technology, social situation) to isolate poor health of the worker is to blame him for non-performance.

Use of dialectical approach

In outlining the political econmy of health, the authors repeatedly use the terms "western medicine" "scientific medicine" "allopathic medicine" and "modern allopathic medicine" interchangeably and then criticise scientific medicine because it developed in a capitalist setting and was moulded by it. It becomes difficult to judge therefore, whether they are critical of the allopathic system's body of knowledge (of which preventive medicine is a part) or its organisation in a capitalist setting or both. Specially because, despite their ideological criticisms, they do not deny that the increase in the number of health personnel and institutions was necessary or useful[2]. The problem is further confounded when talking about the '50s they claim, "if the recommendations of Chopra Committee were implemented at that time they would have resulted in a drastically different system of medicine". Firstly, why a system of medicine that developed in a feudal society would offer a better alternative to the set of social relations imbued in "scientific medicine" is not argued. Secondly, even at the level of ideology why ayurveda as practised in the British period was less class-based, sex-biased and individualistic than allopathy (not to mention its dependence on obscurantism and mystification) is never explained and thirdly, why indigenous medicine would not be just as easily ammenable to capitalist commodity production and absorption in the capitalist system like other feudal institutions is never clarified.

If we agree that the indigenous systems were more widespread and culturally more suited then, we should also grant the bourgeoisie the intelligence to see the profits of a wider market and easy profits of indigenous medicine. However, our intense dislike of the bourgeoisie never really allows us to explore what could have been their other reasons for rejecting indigenous medicines[4]. The problem is, lack of appreciation of the dialectical nature of medicine (allopathic or ayurvedic) which alone can help us to trace the roots of an alternative medical science and technology and an alternative basis for organisation of medical care. Waitzkin does mention a different kind of 'modern medicine' which was practiced by Virchow. However, he does not explore the reasons why the germ theory instead of strengthening actually undermined both epidemiology and public health and what role these disciplines played in the 18th and 19th century.

A much discussed subject is reformist and non-reformist reforms. Every one seems to agree that the former is bad and the latter good because non-reformist reform alone can lead to revolution while the former only strengthens the system. What we tend to forget is that implimentation of reforms is a tool for survial for the bourgeoisie and not the function of a revolutionary movement. The latter extracts reforms, struggles for it but does not implement it. Lessons from history teach us that the essence of a reform is in the change that it introduces in the structure of the bourgeois society and not the material benefits (though they are very important at that point of time). Reform has its own dialectics, it may diffuse a struggle but it also heightens the contradictions within the bourgeois structure. In other words, it sows the seed of change in the objective reality of social structure and not in the subjective reality of working class consciousness. That is the role of revolutionaries.

To say that experiments which help leaders of a working class movement in increasing class consciousness is reform (even if it is called radical) or to claim unimplemented drafts of the opposition as radical reforms (they are demands for reform not reform) is not only wrong but misleading. Misleading because it tends to divert attention from the essence of reform (structural change) and confuses it with either "mobilisation of political support" as claimed by Waitzkin or with strengthening of a union as Binayak and Ilina do. They ignore the fact

that a politicalised union as strong as Chhattisgarh Mukti Morcha is not making provision of health services a part of its demands and extracting it out of the management, instead, it is providing these out of the wage of workers (same as the bourgeoisie) ! In doing so it leaves the health structure created by the bourgeosie intact and therefore is not struggling or extracting reforms at all. The step might be radical but there certainly are no reforms.

The issue whether a revolutionary union is justified in running its own hospitals, schools and industries is a separate issue all together and I won't go into it. But I would like to point out that Binayak and Ilina tend to confuse "reforms" with "reformism". The former is a visible change in the objective reality, the later an approach, a subjective component of ones ideology. A reformist (whose ideology may be reformism) may attempt to "suppress emerging class antagonisms" through reforms and might "need to derive strength" from wherever but the reform is innate (it cannot be vitally conscious of itself) and is the seed of change for it has the potential of hightening contradictions and weakening the very system which the reformist tries to save.

Unless we appreciate this dialectical nature of reform (and all other phenomenon) we would never grasp the meaning of the quotes that we quote. We would continue to make the mistake of rejecting things in toto — whether it is "text book epidemiology" or " operation research rooted in capitalist culture" and not apprehend the elements of a revolutionary alternative which exist not outside but within the bourgeois society.

If we agree that the basic assumptions which we started need to be reexamined in our given context, then we might also agree that perhaps the way to make a beginning is to attempt detailed analysis of the contradictions within the health system and their manifestations. For example a study of contradictions in health care policy and practice (one professes service to all, the other provides for some, one eulogises free medical care the other promotes private service, one emphasises preventive the other curative medicine and promotes technology to solve social problems) will help us locate the relevance of what was mentioned in passing in the main article as "constraints" to bourgeois "options". These "constraints" of foreign capital intervention, class pressures and class conflicts and a policy of welfarism in absence of adequate capital accumulation are actually the links between health planning and the wider socio-political and economic frame of the society. Links which need to be further studied with references to health as well as the Indian social formation.

The challenge that SHR faces is to build up a theory rooted in Indian reality. For this four things are necessary. One, that the frame-work that we use must be first critically evaluated. Second, that our analysis must concentrate on trends emerging from the available information and data on health. Third, we must attempt at collecting data where it is necessary. Lastly, if our study demands an exploration of the wider social system then that must be attempted. Towards this I join you in solidarity.

Notes

1. I hope they would not mind my use of first names. My effort is not to score points but to share with them what I think and first names make it easier.
2. Liberalism is very much a part of bourgeois ideology which reflects the positive forces within it.
3. Even if they really consider it futile then their rejection of modern medicine is clear and my argument does not change.
4. I do not mean that indigenous medicine is to be rejected. My plea is that the same analytical framework should be used for indigenous medicine if is to be compared with modern medicine.

WORK HAZARDS : WHAT CAN WORKERS DO ?

The best devices for detecting hazards in your workplace :

Nose : To smell foul odours as a tip off to hazards and to stick where management says it doesn't belong !
Ears : To listen to the complaints of the workers
Eyes : To spot hazards and poor work conditions
Mouth : To argue the worker's point of view
Guts : To have a gut level reaction about what's right and what's wrong and to have the strength to stand up and get the hazards corrected
Brain : To be imaginitive in building the union's safety programme

'Death on the Job'

a d'mello

Death on the Job — Occupational health and safety struggles in the USA. Daniel M. Bergman, Monthly Review Press, New York, 1978, 2 pp. 12.95 dollars

The movement for awareness about occupational health and safety is still in its infancy in India. Trade union activists and social workers involved in welfare projects for industrial workers will be mollified by knowing that even in what is probably one of the most unionised countries in the world, the movement has still not caught on in a big way. Occupational health and safety struggles have still a long way to go before they make a dent in governmental and industrial circles.

Daniel M. Berman in his book "Death on the Job", which deals with occupational health and safety struggles in the USA, states that despite the passage of the 1970 Occupational Safety and Health Act (OSHA) as a consequence of widespread social discontent in the 1960's, major changes still remain to be achieved. "Violence against the spirits and bodies of workers continues".

The author states that business has been forced to deal with issues of occupational safety and health under two different sets of conditions, during war imposed labour shortages and during periods of severe social upheaval. When labour is extremely scarce, employers worry about preserving the labour they control by making the work more attractive. During times of severe social unrest workers demand better conditions. In both cases business tries to jump ahead of the workers and create institutions which define the problems of health and safety in non-threatening ways and take the sting out of the workers unrest. Berman speculates that perhaps the new occupational health and safety movement arose during an epoch that combined labour shortages and widespread protest against the unpopular war in Vietnam.

Tracing the history of the movement, the book deals with the manner in which the early twentieth century US corporations responded to concern about work accidents by setting up a business controlled compensation safety apparatus which held down compensation costs and did little to improve working conditions. This apparatus was able to exclude the issue of occupational health and safety from open debate until the late 1960's through its control of research, education, workers compensation, governmental appointments and by creating the public impression that health problems in the workplace were non-existent. As a result, the pain and bloodshed and nearly all the money for the costs of work-related diseases and injuries are still borne by workers and their families, and the public at large. That way, say's Berman, its cheaper for the industry.

With the exception of the United Mine Workers' activities and sporadic local uprisings, unions have been seriously involved in health and safety only in the last decade since they mobilised to pass the Occupational Safety and Health Act of 1970. The OSHA law says Berman, was made possible because of a tight labour market, worker dissatisfaction, the new environmental consciousness, the aid of progressive professionals and a climate of social unrest in the USA.

Berman, while giving reasons for the lax safety standards in the industrial sector, pinpoints the political-economic context of industrial safety at the turn of the century. The rapid industrialisation of the United States produced a multitude of new dangers for workers. Big business, unable to control ruinous competition and confronting a militant working class and a growing socialist movement, sought the aid of the federal government. The fruits of fabulous productivity increases were gradually concentrated in fewer hands, symbolised in 1901 by the organisation of the United States Steel Corporation, the nation's first billion dollar business. As a result the competitive sector i.e. independent farmers and small businesses, were squeezed by the relentless advance of big business allied to the banks. Smaller manufacturers, unable to raise prices easily violently fought unionisation, while few leaders from the monoply sector began to devise sophisticated methods to forestall unionisation through token welfare policies.

Meanwhile, by the end of the nineteenth century' large corporations and sweatshops began employing millions of hopeful immigrants in dirty jobs that still paid better than peasent work in Southern and Eastern Europe. Giant corporations, led by the railroads, usually learned to use regulatory commissions

to consolidate their control of markets and public opinion. The Congress and the Presidency were finally secured for big business by the elections of William Mokinley in 1896 over the ragtag Democratic-Populist coalition. Labour, beaten badly in a series of strikes in the late 1880's was on ascendancy in 1900 but unions made little progress in organising the new mass-production industries. A 1904 report in the labour press estimated that 27,000 workers were killed on the job each year, and a 1907 Bureau of Labour report put the annual death toll at 15,000 to 17 000 of 26 million male workers. Women's work was low paid and sometimes more dangerous.

Even though there were unions fighting the issue of workers compensation the odds were stacked against the workers right from the beginning. By 1908 workers' compensation and job accidents had become major items on corporate agendas. Existing common law doctrines made it impossible for workers to collect damages for injuries suffered on the job because the worker had to prove the employer was at fault. This was particularly difficult for severely injured workers to collect damages for injuries suffered or for workers killed on the job whose relatives had to depend on the testimony of supervisors and co-workers who could be bought under employer pressure.

Though workers' compensation became a major theme by 1920 occupational diseases however never merited much attention in either the model or actual laws, and so they remained as they were till the late 1960's. Till then the workers compensation systems and the unenforced industrial safety laws proved to be everything their corporate sponsors had hoped for. Both management and insurance interests benefited by the shift from chancy jury trials to administrative agencies whose employees could be bought off or coopted. Physicians were hired to deal with work injuries and to represent employers within the compensation bureaucracy, creating that peculiar institutional "ghetto" called industrial medicine.

Berman gives interesting details on what methods the big corporations adopted when they were dealing with workers who were organised. One such example is the case of the Amalgmated Association of Iron, Steel and Tin Workers, a craft union, enrolling only skilled workers. The Amalgmated Association reached its height of power in the late 1890's and the Homestead, Pennsylvania, mill was its biggest locale. It was also the biggest mill of Carnegie Steel, the largest US steelmaker.

"At Homestead about 25 per cent of the 4,000 workers were in the union, where they controlled all aspects of production. This situation was unsatisfactory to Carnegie Steel for two reasons : according to the contract, workers got a constant share of the increasing sales of the mill, and they had the power to prevent the introduction of labour-saving technology if it did not suit them. Carnegie resolved to break the labour in a definitive test of strength, Before the contract expired in 1982, the management built a three mile long fence around the plant with shoulder level rifle holes every 25 feet. The workers were told that after June 24 the Carnegie would deal with them only as individuals. On July 2 most unionised workers were locked out. The union backed by all the workers responded by shutting down the mill renting a steam boat to patrol the Monoghaela river, and orgainsing the whole town for resistance. When bargeloads of three hundred armed Pinkerton men were brought to force the mill open and bring in scabs, an open gun battle resulted, sixteen were killed, including seven Pinkerton agents and the rest of the invaders surrendered to the workers and their families. But after a four month strike Carnegie won the Homestead war with the help of the Pennsylvania militia and the plant resumed production without a union. Loss of its most important outpost was the beginning of a rapid decline for the Association. After a disastrous strike in 1902, the union was completely uprooted from the steel industry".

In 1910, U.S. Steel inaugurated the Voluntary Accident Relief Plan, based on models developed in Bismarkian Germany by a conservative capitalist class under challenge from the fastest growing socialist movement in Europe. The programme, soon superceded by the state workers compensation laws, was the first of its kind in the USA and paid workers or their families fixed amounts for job-related injuries causing disability and death. The plan for all its purported liberality stated explicity : "No relief will be paid to any employee or his family if suit is brought against the company' and workers who received relief were required to sign away any further rights to sue U.S. steel. This became the model for the rest of the USA.

The compensation safety apparatus is the complex of mostly private, corporate-dominated organisations which are concerned with compensation, workplace inspection, standard-setting, research, and education in occupational health and safety. It is called the compensation-safety apparatus because it emphasises compensation over prevention

and safety over health in its activities. It is an apparatus because it has executed the policies of only business and insurance interests for decades as the organised constituency in occupational safety and health. Only in the last ten years has its dominance been challenged by workers, unions and their progressive allies.

Serious attack on the compensation-safety apparatus began in the late 1960's in the coal mines, over issues of black lung. The issue was taken up by workers in industries all over the USA. President Nixon finally signed the Occupational Safety Health Act of 1970. The law, says Berman, promises more than it delivers. However from this step onward things begin to change and various unions take up the issue of occupational health on a larger scale. Berman goes into details about the conditions of work in the oil, chemical, rubber and atomic industries and the way in which their respective unions tackle the problem of occupational safety. Interesting details emerge of the lifestyles of some of the American labour leaders. Referring to the largest union in the USA the "Teamsters" Berman states that "Top Teamster officials live royally on the members fees. Five jet aircraft and two turboprops worth over 13 million, dollars and costing over 2 million dollars annually, fly the top leadership to its missions. Frank E. Fitssimmons, general president, recieves an annual salary of 156,000 dollars and a host of other benefits, and Harold Friedman, president of Bakers Local 19, a Cleveland local associated with Teamsters, recieved the astonishing total of 352,330 dollars from his various union jobs in 1976. Compared with their leaders lifestyle the Teamsters efforts in health and safety are decidedly meagre".

There is also a chapter on the future politics of working conditions and Berman says that with the coming of more and more automation the future worker will suffer more from stress hazards as compared with the worker of today. The book contains useful tables and statistical information about the compensation apparatus in the USA.

(Contd. from page 129)

already poor health due to the vicious cycle of disease and environment as already pointed out.

There are certain morbid conditions which are associated with the unphysiological posture while doing agricultural work, for examples while sowing paddy one has to stoop for hours together which ersults in backache. Postures during harvesting of wheat and rice are also uncomfortable and unphysiological giving rise to a variety of joint problems.

Lastly, there is a miscellaneous group of disorders to which agricultural workers are much more prone than the people at large. Sun stroke and heat stroke are quite common because of prolonged hours of work in the scorching heat. Ailments of the eye are also more common because of the harmful sun rays and dust falling on the unprotected eyes. Injuries to the eyes are also quite common because of the same reason. Agricultural workers are quite familiar with the bites of poisonous animals like snakes and scorpions etc. Prevalence of hookworm infestation is much higher than the general population because of their compulsion to work barefooted in the fields. Farmer's lung, hay fever, allergies of various types and fungal infections of the skin are some of the other examples of morbidities which the agricultural labourers likely are to suffer from.

In the profit generating exploitative socio economic pattern of production human labour has been reduced to a mere commodity. Least concern is made for this perishable tool (the labour) in the race of maximum profits. The working conditions adversely affect the workers health and in some cases prove to be fatal.

Pale skinned, thin dyspnoic labourers working in chemicals and pesticides factories : Pneumoconiosis affected child labour in slate, lead, silicon industry convey the same story.

We have made an attempt to focus attention on the health hazards which the agricultural labour is exposed to. We hope that it will initiate a debate which will improvise and enrich our understanding and contribute to the vital struggle for equality and justice.

People's Health Group
Galli No. 3
Gurbux Colony
Patiala, Punjab

Why don't you write for us ?

This periodical is a collective effort of many individuals active or interested in the field of health or interested in health issues. The chief aim of the journal is to provide a forum for exchange of ideas and for generating a debate on practical and theoretical issues in health from a **radical or marxist** perspective. We believe that only through such interaction can a coherent radical and marxist critique of health and health care be evolved.

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Our forthcoming issues will focus on : Politics of Population Control, Health and Imperialism, People in Health care and Systems of Medicine.

If you wish to write on any of these issues do let us know immediately. We have to work three months ahead of the date of publication, which means that the issue on Politics of Population Control is already being worked on. A full length article should not exceed 6,000 words and the number of references in the article should not exceed 50. Unless otherwise stated author's names in the case of joint authorship will be printed in alphabetical order. You will appreciate that we have a broad editorial policy on the basis of which articles will be accepted.

We have an author's style-sheet and will send it to you on request. Please note that the spellings and referencing style of reprint articles are as in the original and are NOT as per our style.

We would also like to receive shorter articles, commentaries, views or reports. These need not be on the themes we have mentioned. These articles should not exceed 2,000 words. Please do write and tell us what you think of this issue.

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Push Back the Catasrophes

I don't want a drought to feed on itself
through the tattoed holes in my belly
I don't want a spectacular desert of
charred stems and rabbit hairs
in my throat of accumulated matter
I don't want to burn and cut through the forest
like a greedy mercenary drilling into
the sugar cane of the bones

Push back the advancing sands
the polluted sewage
the dust demons the dying timber
thé upper atmosphere of nitrogen
push back the catastrophes

Enough of the missiles
the submarines
the aircraft carriers
the biological weapons

No more sickness sadness poverty
exploitation destabilization
illiteracy and bombing

Let's move towards peace
towards equality and justice
that's what I want

To breathe clean air
to drink pure water to plant new crops
to soak up the rain to wash off the stink
to hold this body and soul together in peace
that's it

Push back the catastrophes

—**Jayne Cortez (black woman poet)**
(From : Coagulations : New and Selected Poems, 1984)

Vol. 1 No. 4

POLITICS OF POPULATION CONTROL

SOCIALIST HEALTH REVIEW

FOREIGN AID AND FAMILY PLANNING IN INDIA

MARXIST CRITIQUE OF THEORIES OF REPRODUCTIVE BEHAVIOR

CONTRACEPTIVE TESTING ON WOMEN

MOTIVATIONAL STRATEGIES FOR FAMILY PLANNING

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The views expressed in the signed articles do not necessarily reflect the views of the editors.

POPULATION CONTROL : FOR OR AGAINST PEOPLE ?

Whereas Malthus related population and population growth to consumption, Engels and Marx related them to production. By the Malthusian hypothesis, population could be checked by means of forcing down the wages which would in turn lead to a natural increase in death rates. Marx posed the question as to whether overpopulation was in relation to the natural resources or to the needs of the prevailing system. This debate, the first on the issue of overpopulation represents to date the crux of the ideology supporting the reasons for population growth and consequently the measures necessary to curb it.

The capitalist mode of production as a prerequisite demands a surplus population from which an everready supply of human material — surplus labour — is created for exploitation. Overpopulation has therefore to be seen in terms of this mode of production and not as a consequence of the 'Eternal Laws of Nature' (Meek, 1971). In capitalist society the actual producers are alienated from the means of production because the latter are owned by the capitalist. Production is geared to the market demand and not to the human needs of the population. Therefore, the Malthusian prediction that growing populations would be the main cause of world-wide starvation is a historical error. The truth is not 'how many people' but 'how many people who can afford to buy enough food just to stay alive.'

In his polemical writings against the Utopian thinkers of his time, Malthus expressed contempt for the poor. He claimed that the unemployed poor were a burden on Nature's reserves and therefore, had no right to live, leave alone to reproduce. Biased heavily in favour of the English aristocracy, his pseudo-analysis about the 'inferior ranks of people' offers a rescue even today to population control propagators when they have to explain 'undesirable' events, the rational and truthful explanation of which can result in 'undesirable' consequences such as the conscientisation of the oppressed masses (Bondestam, 1980).

The Real Facts About Poverty

Malthus' observation that a reduction in population size would release the otherwise limiting resources is only apparently true. When the entire family lives at a subhuman level of subsistence, having lesser children does not increase the standard of living perceptibly. They still live below the poverty line; often all of their life is spent only in combating death from hunger and starvation. Escape from death however does not mean any improvement in the standand of living. Malnourishment, unhygienic conditions and strenuous physical labour, all together increase body weakness and decrease body resistance to acute and chronic disease. Morbidity creates further poverty (due to inability to work, expenditure on disease) and eventually leads to death. Either way death seems inevitable. The reason for producing or wanting to produce more children is economic and its resultant is the surplus lives produced.

Among the poor, the cost benefit of having more children is greater than when they have less. At a very young age, the child becomes either a direct wage earner or helps enhance the family income indirectly (baby sitting, filling water) by relieving the adults of household chores. Having many children is thus not only beneficial but also necessary because not all children that are born would live beyond the age of five. It is only when a steady income flows in regularly that having more children becomes a liability. A small family norm is a middle class value and to force the poor into accepting this norm without improving their economic and social conditions is inhuman.

Release of resources through population control is possible only when resources are universally available and uniformly distributed. The inequalities in access even to basic services such as health care become apparent through the fact that though 80 per cent of the Indian population is rural, only 46.2 per cent of the total health budget is allocated for this population. Worse still, the public health personnel are so overburdened with family planning responsibility that primary health care has become synonymous with birth control for the rural population.

The poor live in deficits and debts, therefore a reduction in family size will not create any savings. Population control cannot ensure that the released

resources, however insignificant will be invested to benefit the poorer sections of society. A fair distribution of resources is possible only in a socialist society where the means of production are distributed fairly. The propaganda that population control will release available resources is just an eyewash (Quadeer 1976).

Neo-Malthusians and The Ideology of Population Control

The Malthusian theory of arithmetic increase in food production and the geometrical increase in population and the ensuing doom was belied by bourgeois development in Europe in the 19th century as also through the import of this development into colonial India. It was at this point that the capitalist forces in the form of neo-Malthusian arguments introduced the 'population bomb' hysteria. Neo-Malthusian ideology was part of the reactionary counterstrategy against rising socialist forces. They propagate the view that demographic factors are the main cause of economic and social difficulties experienced by developing countries and to control natality is the neo-Malthusian solution. This propaganda is furthered to divert public attention from the real facts about poverty and in order to disorganise and weaken struggles aimed at democratisation.

The propagators of family planning can be broadly classified into people who apolitically and genuinely believe that population control is the answer to the world's problems and neo-Malthusians who use family planning to propagate their own ideology. But the distinction is not sharp. For instance Margaret Sanger who did pioneering work in challenging religious orthodoxy regarding contraception considered that the American public was being too heavily taxed to maintain a 'growing stock of morons' (referring to the American poor) who 'threatened the very foundation of American civilisation'. Her statement was recollected with fervour by the neo-Malthusians whilst unleashing a population control programme among poor Puerto Ricans with lowered intelligence.

The neo-Malthusian ideology holds the distribution of existing resources as being inversely proportional to the growth of the 'teeming millions'. The truth is that the existing resources are concentrated in the hands of a few in a capitalist order. The underlying fear behind this gross misrepresentation of facts is the imminent possibility of socialism gaining terrain due to the rising unrest among the unemployed and the exploited working class. Capitalists even today form the major donors to the population control funds throughout the world, either through private agencies or through 'legitimate' government bodies.

The Population Control Policy

The 1974 World Population Conference at Bucharest gave a call (in fact Dr. Karan Singh, the then Health Minister of India, did) for 'development being the best contraceptive'. Ironically, one year later, India plunged into coercive and inhuman sterilisations under the Emergency regime of Mrs. Gandhi. Even on the global level, governments of developing countries and private population control agencies were planning family planning as the primary strategy for development policies. Programmes were made more accessible, more attractive and more efficient (Wolfson, 1978).

Though donor agencies recognise social problems, very few have been prepared to support these activities without population control being the frontal strategy of approach to solve problems of poverty and unemployment. Maternal and child health (MCH) is the classical example where donor agencies have diverted their funds to, since MCH is closely related to fertility. Family planning comes along as an indispensable part of the package. Donors make it quite plain that they consider development to be impossible without curbing the birth rate. Family planning is the unavoidable condition to be fulfilled when a developing country asks for international aid.

In post-independent India, most of the leadership belonged to the upper and privileged classes. They often had westernised values and were sharply different from the people they were supposed to represent. Independent India had proclaimed socialism from the roof-tops but in truth only the Indian bourgeoisie as a class had benefited with the elite becoming more privileged day by day. Due to technical incompetence and the quest for profits, there was an increasing dependence on western countries for technical and monetary assistance. A vicious circle emerged because this dependence created further incompetence and servility. Foreign experts virtually shaped India's policies and also acquired a great deal of influence on their implementation (Banerji, 1980). As the economic condition of India deteriorated under free enterprise and lopsided development, foreign aid acquired a crucial role in shaping Indian policies. In the field of population control, western capitalists were able to push in their anti-third world ideology along with aid for 'development.'

India was the first developing country to begin implementing a national programme on family planning as a state policy in 1951. In 1963, a revised and extended variant of the official family planning (FP) programme was put into action. Population control (PC) has become a priority increasingly, in fact with fanatic fervour it has been proclaimed that PC is so urgent that it cannot await improvements in the economic and social fields. It is like putting the cart before the horse. Though the Fifth Five Year Plan promised a "frontal attack on the citadels of poverty" what was actually implemented was an inhuman, anti-poor PC programme.

The role of the Indian government in unleashing all the repressive state machinery on the poor for forced sterilisation has been condemned the world over (Wolfson, 1978). Yet, even today the use of force, pressure, utilisation of the bureaucracy and panchayats at village and taluka levels as well as monetary incentives have become accepted as a form of motivating people to accept FP. If PC is seen independent of development, then motivation and incentives are seen independent of the individual's social existence. Target methods and coercion can also be understood when PC is treated as a substitute for development (Mamdani, 1972). Family planning is much easier to implement than major advances in the areas of education or the economy and though it has been repeatedly stated that FP is part of the package of development, it has been thrust as a substitute for development and structural change.

The Feminist Perspective

It cannot be denied that birth control has created more options for women. Knowledge and availability of birth control measures is a matter of women's rights because women should be allowed to govern their own fertility. Repeated pregnancies and the drudgery of constant child-rearing not being conducive to good health, it is of extreme importance that women have access to safe and effective methods of contraception.

The disturbing factor however is that the aggressive incentive based population control programme has not allowed this right to stay with the woman. Policy makers decide whether a woman should have children, if so how many or whether she should be allowed to abort her own foetus. Doctors and social workers in clinics for abortion and contraception tend to adopt moralistic attitudes. Pharmaceuticals decide that women should passively accept the contraceptives that fetch the largest profits to the manufacturers. Third world women are constantly used for the field testing of dangerous contraceptives. Primarily black and Spanish-speaking women are targets of sterilisation in the USA. Cultural biases in India naturally compel a woman more than her husband to accept the FP operation and poor as well as lower caste rural women have been targets of the mass sterilisation camps as well as those for Copper-T insertions. Powerful patriarchial institutions in fact have strengthened their hold over the woman's reproductive organs through birth control.

Even the bourgeois state fills in the gaps either at home or outside it through population control and birth control. A woman's leaving home for a job does seem as though she has a greater freedom of choice, but in truth it is the flexibility and compulsion of the changes in the labour market that have left her with no choice but to enter the production force as a wage earner. Even if a woman is a wage earner, her family labour always comes first. The birth control policy monitors her 'reproductive' and 'productive' duties. Abortion laws should also be seen in the same context. Population control has increased state and international control on a woman's intimate physiological function under the guise of 'making available a birth right'.

The alarming anti-woman trend in the new reproductive technology (NRT) needs to be studied carefully. Unichem and German Remedies will probably be given the licences to manufacture the injectable contraceptive NET-EN in India. Hormonal implants which render infertility for upto five years are being tested on Indian women inspite of dangerous side-effects. Amniocentesis for female foeticide has been covertly recommended by FP propagators since girl babies are the future 'breeders'. Research to develop a 'male child pill' is being recommended (Postgate, 1973). With the growing concept of surrogate motherhood, women could be converted into breeders in a reproductive brothel where the most powerful socio-political control over women's reproduction would be made possible (Dworkin, 1983). Here, the 'valuable' ova and sperms from white couples could be merely incubated in the wombs of brown or black poor women, sterilised for convenience (Corea, 1984).

We open this issue with Ramala Buxamusa's article based on her Ph.D. thesis which exposes the impact that foreign aid has had on the Indian population policy. International aid to the third world for development contains major funds for

population control in an attempt to prevent the developing countries from becoming socialist. She traces how the initial resistance of the Indian government broke under international pressures.

Sucha Singh Gill's article convincingly examines the ideological content and class bias of the birth control programme. According to him, the emphasis of the Indian planners on population control is an attempt to weaken the class struggle in India.

In the third article, Kusha relates her experiences in a contraceptive testing unit in a working class area of Bombay. During her association with this unit for many years she saw contraceptives ranging from diaphragms to hormonal implants being tested for field trial on working class women inspite of the unpleasant and dangerous side effects they created. Her first hand experiences are eloquent.

Ilina Sen focuses on the motivational aspect in the family planning programme. When the earlier subtle motivations failed to increase family planning acceptance, the government plunged into an aggressive disincentive based coercive birth control campaign. Ilina examines the social and psychological theories on which the motivational strategy was founded and highlights the fallacies that accompany the present family planning programme.

Vimal Balasubrahmanyan takes a critical look at the trend in the incentives and disincentives in family planning without making a single comment! In a carefully prepared collage and not without a glint of humour, she traces the dangerous trend over a period of two years (1982-84).

The last article in this issue by Martha Giminez is reproduced from the Review of Radical Political Economics. She discusses the micro economic and the sociological theories that analyse reproductive behaviour and presents a marxist critique of the same. She argues that reproduction should be conceptualised in the context of a given mode of production.

—manisha gupte

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We have three subscriptions sent by M.O. in the last three months which have no addresses. The only information we have about our phantom subscribers is as follows : (i) From Anthya M, somewhere in Kerala (ii) From somewhere in Karnataka, and (iii) From somewhere in the Hindi-speaking region ! If any of you know of people who have not received our acknowledgements for their M.O. please ask them to write to us.

The Printed Word

newsclippings on health and medicine, july – september 1984

Health Policy and the Health System

Deccan Herald, 21 July: A 58-year old man was electrocuted at Ram Manohar Lohia Hospital, New Delhi when the metallic stand for hanging the glucose drip came into contact with the overhead light, which had been known to be giving 'shocks'.

Business Standard, 2 Aug.: USAID has offered to develop basic infrastructure (buildings for health institutions, residential complexes) and to improve the health delivery system, (including family planning and maternal and child health) in Bhiwani Mahendragarh and Sirsa district of Haryana. In phase I the USAID has released Rs. 7 crores.

The Daily, 15 Aug.: Yet another patient of the ESIS hospital at Kandivili in Bombay leapt to her death from the third floor. The patient had been considered 'rowdy' apparently because she was not able to bear the pain due to acute apendicitis, for which she had been admitted a month previously but had not been operated upon. The reasons for the delay in operating remain unclear.

The Hindu, 30 July: The Working Group of the Central Council of Health and Family Welfare has made the following recommendations: (1) The creation of mobile opthalmic units in all districts and stringent action against unauthorised persons conducting eye camps; (2) A whole-time trained TB officer with supporting staff at the directorate level for proper suppervision and monitoring of the national TB control programme (3) All hyperendemic districts to be covered with multi-drug regimen projects during the 7th plan period; and (8) All states to repeal the Leper's Act of 1888.

Financial Express, 18 Sept.: The government has sanctioned a budgetary allocation of Rs. 547.46 crores for the central sector health programmes for 1984-85 as against Rs. 482.02 crores in the previous year.

The Telegraph, 19 Sept.: In the WHO regional committee for southeast Asia, India has offered its 'vast reservoir of trained medical manpower' to neighbouring countries for meeting their immediate requirements and in organising training programmes for their medical personnel.

The Hindu, 25 Sept.: The Eighth Finance Commission has recommended a monthly allowance of Rs. 400 for doctors serving in rural areas.

Hindustan Times, 28 Sept.: A steering group appointed by the planning commission has proposed the allocation of Rs. 13936 crores for health and family welfare in the 7th Plan. It represents 8.3 per cent of the total public sector outlay of Rs. 180,000 crores envisaged for the period. The health sector's share in the 6th plan was just 3.3 percent. Out of this, Rs. 10457 crores (about three fourths) will go to the family welfare sector.

Medical technology and developments in medicel practice

The Hindu, 12 Aug: By the end of 1984-85 three medical colleges in Tamil Nadu, all district headquarter hospitals and 22 hospitals at the taluk level in the state would be equipped to deal with accident and emergency cases.

Financial Express, 20 Aug: A production of Rs. 350 crores is envisaged in the 7th plan for the manufacture of medical electronic equipment. The Department of Science and Technology has estimated that a tentative investment of Rs. 60 crores would have to be made during the plan. During 1982, the total production was of order of Rs. 13 crores but is expected to rise to Rs. 20 crores in 1984. But the demand is estimated to be Rs. 45 crores worth. In 1976-77 20 MEE products termed 'life saving equipment' had been exempt from customs import duty. The list has now risen to 47 items.

Protests, Strikes and Agitations

Times of India, 8 July: 7,000 medical personnel of the Government and municipal hospitals —4,000 resident doctors, 1,500 post graduates, and 1,500 interns will go on an indefinite strike to protest against the Maharashtra government's decision to start private medical colleges accepting capitation fee. *(Contd. on page 147)*

THE DISASTER

A reaction to the tragedy at Bhopal

The saddest fact about the Bhopal tragedy—quite apart from the horror of the numbers involved — is that it was man-made. And the people who were responsible were **Not** the ones who suffered. As one newspaper put it, "Man-made disasters, like natural ones seem to show a particular affinity for the poor." Why did it happen ? Who were the victims ? These questions have a bearing upon distinct social and political realities in India in particular and the world in general, that have been forged for us by our ruling classes.

Consider our perspective for industrialisation for instance. We have borrowed not only the capitalist framework of development but begged and borrowed the capital technology of the industrial nations. Third world countries which have historically been the plundergrounds of today's advanced nations, have been put into a peculiar dilemma — the workers and the poor still have to fight for a decent living and a decent wage in a labour surplus economy, sometimes to the exclusion of struggling and fighting against other destructive forms which industrial capitalism has unleashed. Moreover, workers are first taught to despise safety equipment and regulations, as mere obstructions in 'productive' efficiency and then when they suffer, they are told it is because of **their** carelessness. And to compound it, workers are forced to live with occupational hazards—they are undertrained, safety systems and procedures are substandard. Issues relating to health and safety are overwhelmed by wage negotiations or depoliticised.

In other words, it is built into capitalism that health of workers or of others may be affected is a low priority investment area that eats into profits 'unnecessarily' (See SHR 1:3). In advanced industrial countries, there are groups — workers and environmental lobbies — which fight this tendency tooth and nail. But here in India it takes a Bhopal to jerk us into a state of elementary environmental consciousness and that too at such a huge loss of life.

And yet the events that led up to the disaster form a familiar story in many third world countries. A multinational company with a lot of political clout works hand in glove with a corrupt, heavily bribed government to safeguard its profits despite the laws and regulations of the land. Hostile administrators are transferred, and factory inspectors bribed. And then there are other advantages such as what Union Carbide gained—cheap underpaid labour from slums and bastis around. Whatever happened to the industrial siting and zoning laws ?

There has been much written about the tragedy, and some issues have become controversial. But some facts are indisputable. Without a doubt there was insufficient safety design built into the plant. Proper foolproof safety means precisely the ability to take care of such emergencies. But in Bhopal the scrubber was meant for smaller amounts of gas, and the water sprinkler system was inadequate. Why were there no computerised warning systems here? In American and European facilities, even storage areas have elaborate arrangements of automated sprinklers, foam generators and so on. We are scapegoats and victims precisely because our ruling class wants us to be. And then there were operational lapses. If slip blinds were not inserted at the right points or if some crucial valves were left open, it is dominantly the ideology of carelessness as subtly cultivated by the management because it helps in two ways—one, disregard for 'cumbersome' safety apparatus or rules enhances the pace of 'productive' work and two, in an accident a concerete 'careless' act can be identified and the blame put on the worker responsible for it. And what of the process and plant design ? A textbook (David and Stanley, see box) says that out of the three methods for producing isocyanates, only the one using phosgene is 'economically viable'. Obviously, if regard for the environment and people's health were to be a major criteria, there would be far fewer hazardous processes. Union Carbide had changed over to the MIC route for manufacturing the pesticide from the less profitable 'chloroformate' route even though the latter did not have MIC as a storable intermediate and was therefore that much less hazardous. It is ultimately a question of choice and very often, of the many alternative routes available, the cheapest and hence the most profitable is termed 'economically viable'.

The Information Monopoly

There is not much information available in 'open' literature on MIC and its effects on biological systems. The one source which could have provided this information was Union Carbide which either maintained a stoic silence or issued deliberate misstatements

to the public. Unfortunately the confusion was further intensified by our 'experts' who issued absurd and incorrect statements. And those who could have provided relevant information were instructed to be silent. In fact, by dramatising operations like the 'neutralisation' of MIC, scientists further complicated the situation. Rather than providing information and assurances backed by facts, our scientist-politician combine preferred to dramatise the situation and mystify technology. A demand for information and public access to records and to data is an important component of the demands put forward by a number of people's groups working on environmental and health issues. We have to work to pursue and support these demands,

— anurag mehra

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Here is a brief list of references which might yield information.

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2. *Bhopal Gas Tragedy.* Delhi Science Forum, B—1, 2nd floor, J Block, Saket, 48 pp New Delhi 110 017 Rs. 5/-
3. *Human responses to isocyanate exposure* by R. V. S. V. Vadlamudi and V. A. Shenai of Department of Chemical Technology, University of Bombay in *Science Age*, January 1985. The same issue carries three other articles on Bhopal.

(Contd. from page 145)

The Telegraph, 18 Aug. : About 6,000 junior doctors in all the 7 medical colleges in U. P. are on indefinite strike in protest against the alleged police assault on doctors of the Swaroop Rani Hospital in Allahabad.

Professional bodies in health care

Times of India, 25 July : Should doctors working full-time as medical advisors to pharmaceutical companies be allowed to hold office in professional associations of physicians ? The issue is being hotly debated following attempts by two doctors from multinational companies to seek election as presidents of two such bodies. The issue is of particular relevance in view of the coming election of the Association of Physicians of India, the largest organisation of medical specialists with a membership of 4,000. The post of president is being contested by two professors of medicine from Bangalore and Bhopal respectively and by Dr. Paul Anand, a full-time director of medical research of Glaxo Laboratories. Six months ago Dr. A. S. Kochar from the same company had sought elections as president of the American College of Chest Physicians (ACCP), but the attempt had failed on procedural grounds.

Indian Express, 21 Aug : A complaint has been registered against an alleged quack who was operating as a qualified medical practitioner. His credentials were first suspected by the manager of a bank which had granted the 'doctor' a loan. The Maharashtra Medical Council sources say that for each such case detected many others may go unnoticed.

Free Press Bulletin, 7 Sept : A doctor who is a Congress (I) MLA and the chairperson of the Maharashtra Small Scale Industries development Corporation has had his name struck from the registers of the Maharashtra Medical Council for negligence and violation of medical ethics a year ago, continues to practice. The complaint had been registered by a patient whose left leg had been crippled following a wrongly administered injection in the knee cap.

Compilation : AJ, PP

The news items have been compiled from the files of the Centre for Education and Documentation, Bombay. We request readers to send us relevant items, especially from the regional press.

THE PRICE OF ASSISTANCE

The Family Planning Programme in India

ramala buxamusa

The evolution of the family planning programme has been greatly influenced by the foreign aid it has received. The author describes how (i) the nature and origin of 'aid' has changed and (ii) how and why the initial resistance of the Indian government to such aid crumbled. Not only the family planning policy but the methods of contraception promoted through the programme were determined by the aid, received directly from donor agencies or via international bodies such as the several UN agencies.

A commonplace assumption that goes virtually unquestioned these days is that the chief cause of every problem from the growth of slums to unemployment, famine, pollution, liberation, wars and strikes is overpopulation. Futurologists paint a pessimistic picture of the world in 2001 AD especially with regard to the third world and call for population control, that is family planning as the supreme panacea for all social evils. Similar views prevail amongst the Indian planners who accept the views that originated chiefly in the first world.

It is the hypothesis of this study that the present population policy is largely the outcome of factors other than mere socioeconomic and political changes in the country. The impact of external assistance as aid and loan received in cash as well as in kind has, over a long period of time, influenced the government's population policy. Although the government has shown ambivalence in implementing the population control programme, and although it is not officially accepted that the government's programmes rely largely on foreign aid, it can be proved that this external assistance has mainly been responsible for the population policy and programmes in this country. (1)

The Pre-Plan Period : 1947 to 1952

During World War II there was a lull in organised birth control activities. After the war statistical studies quickly gained momentum as valid science and "Asia's teeming millions" became a vital subject for investigation, particularly with the growth of political movements in India, China and south east Asia. The deepening food crisis in these areas frightened many American thinkers into the belief that they would turn communist (Borie, 1948).

As early as in 1946 the Swedish National Association, financed by some Americans tried to build up a liason between societies interested in population control but as the time was not ripe efforts failed (FPAB 1948). Later in 1948, with the deepening food crisis all over the world the Family Planning Association of Great Britain and the Swedish National Association under the leadership of Margaret Sanger organised the 1st International Conference on Population of the World : Resources in Relation to Family in London. Here for the first time the 'dignified' term of family planning, actually a euphemism was used in place of 'birth-control'. The conference stressed the importance of human fertility research and an effort was made to involve the UN body but met with no response from the UN (FPAB 1948). In 1948 was born the Family Planning Association of India (FPAI) as a private body. This body was affiliated to the parent body, FPA Britain from which it received funds in cash and kind. During this period there was no direct government aid nor multilateral (eg. UN) aid to India.

In 1949 China turned communist and this shocked the imperialist world particularly the USA. It's reaction and attitude was to "save India atleast". Many thinkers expressed the view that it was essential to check India's population (Vogt,1949). Thus fertility control in India and the third world became a priority for the US monopoly organisations. One hears of birth-control only from the mouths of Americans, Swedish and British individuals and their organisations in the pre-independence period. Catholic opposition did not permit the first world governments nor the UN to get involved in birth control programmes. Private organisations previewing "danger" donated funds to Indian private organisations to open clinics and publish literature to favour birth control. A beginning was thus made by the private organisations in the family planning field in India.

The First Five Year Plan 1951-1956

The nations which the imperialists feared would be lost to communism became known as the

population powderkegs" of the "underdeveloped" world and population control programmes were designed for them. India was selected for special attention. The first in-roads into the population control programme in India were made by private organisations such as the Hugh Moore Fund, the Rockefeller Foundation, the Ford Foundation and Swedish and British businessmen (Mass,1978).

Politically the subject of birth-control was sensitive. In the West there was Catholic opposition to birth-control, forcing private organisations to move with caution. The first approach was to spread the ideology of "overpopulation" through seminars, conferences, publications and through statistics. In 1952 the UN, for the first time, was pursuaded to collect the demographic statistics of the third world countries (Mass, 1978).

Rockefeller, Moore and other private monopolies which had been supporting population studies earlier now made moves to start private international organisations. In 1952 under the sponsorship of the National Academy of Science, John D Rockefeller III convened a conference of demographic experts and population specialists in Williamsburg, Virginia to establish a non-profit organisation, the Population Council. This organisation was to provide a previously lacking "respectable base from which to influence professional and academic sectors to finance a more scientific approach to population". Between 1952-58 the budget of the council was quadrupled, rising from 4.5 million dollars to 18.3 million dollars. A large part of the 1958 budget, 8.4 million dollars was provided by Ford Foundation. It is said that over 500,000 dollars, nearly 80 percent of all the Ford's Fund for population control came to the Population Council. The Rockefeller Foundation also donated 3.4 million and the Mellon family 2.9 million dollars to Population Council (Mass, 1978).

With the creation of the Population Council in New York, British and Swedish businessmen were moved to organise the Third International Seminar in 1952 at Bombay. The Family Planning Association of India (FPAI) managed the show. Many foreign European dignitaries who attended expressed Malthusian views and an International Planned Parenthood Federation (IPPF) was founded, with headquarters in London. Swedish and British monopolies were not able to donate as much as American monopolies and in the 1950's IPPF's budget was comparatively less than that of Population Council. It supported all the affiliated Family Planning Associations of the world. India being the major target of attention, Lady Rama Rau was made the first joint secretary along with Margaret Sanger the pioneer of the birth control movement (FPAI, 1980-81). Margaret Sanger's views on birth control sound markedly racist today; she held that the growth in numbers of poor of the world was a burden and a threat to the peace of the "civilised" and needed to be checked.

India accepted the need for population control and incorporated a family planning programme in its health ministry. It officially opted for the clinical method and the opening of clinics. But in the first three years only the rhythm method was propagated. Private organisations such as IPPF and the International Red Cross donated in cash and kind to their clinics using diaphrams, foam tablets, condoms and conducted sterilisation operations in Bombay and Calcutta. These FPAI clinics were the first of their kind in the world (FPAI annual reports). Sanction for the use of contraceptives (mainly condoms, foam tablets and diaphrams) in the government's own clinics and the Rockefeller and the UN sponsored projects in Punjab and Bengal respectively was given only in 1955 (Ministry of Health Reports, 1952-1956). The Government's action in the first plan was negligible. This is confirmed by the fact that although the government sanctioned as much as Rs. 65 lakhs, no more than Rs. 31 lakhs was spent. This could not be due to mere moralist objections to artificial birth control programme alone. The need for birth control although accepted in principle by our planners, was not felt to be such a great necessity. Hence the difference between allocation and implementation persisted over many decades.

The Second Five Year Plan : 1956-1961 (March)

During this period, the liberation movements in the third world grew stronger. The economic condition of most of the third world deteriorated. For instance, India faced its direct majer foreign exchange crisis in 1957 when the rupee was devalued. At this time, Coale and Hoover rejected the classical Malthusian theory but postulated that due to economic improvement death rates fall but not birth rate, and therefore, economic development is not possible. Thus the argument popular in the west was that investments in population control were more beneficial than investments in development programmes (Coale and Hoover, 1958).

Third world governments however, were not keen on finances from private donors. The Ford

Foundation and the Rockefeller Foundation finding that they instead were being cold shouldered helped in funding the UN. The UN also received funds from the Population Council. In 1956 the UN carried forth the recommendation of the International Social Science Council to collect demographic statistics (ECAFE, 70). It later moved two governments in the third world—one in Asia in 1957 and other in Latin America, to start demographic training centres catering to the people of neighbouring countries. In these institutes consultancy services wers supplied by the UN. Most of the consultants were generally officials on leave from private population control bodies (for instance, Parker Mauldin, an Officer of the Population Council took leave from his office and came to the Bombay Demographic Training Centre as a UN Consultant on the subject) (Population Council Report, 1957). The idea was to train third world people in demography in order to spread the awareness of the need for population control. Thus ironically a member of the Population Council, (the ideology of which was not accepted by the third world), was allowed to help in training and advising Indians on the subject, as he came in the guise of a UN expert. **This trend of private organisations infiltrating the third world through international bodies like the UN and thus gaining acceptance is continuing even today.** It is in this way that their unacceptable ideas influence the population policy of the third world.

The WHO was in fact, severely critcised for organising such programmes for curbing population and controlling tropical diseases. This was interpreted as being not so much for the benefit of the third world, as for providing lucrative business for European and American drug cartels (Mass, 1978.) **An analysis of WHO's own reports reveals that the projects funded in the third world mostly relate to field and human trials of the drugs and chemicals being developed by first world firms** (Times of India, 1981) **Critics point out that but for these programmes, the firms would never have been able to develop the products or conduct such trials in the third word on their own.**

At the same time the Population Council, independently started aiding demographic teaching in Asian and African universities and began collecting demographic statistics as well so as to spread awareness for the need to control population growth. However, in the name of action research, they also carried out the testing of certain contraceptives which had not been tested or approved by their own government. The first world Drug Laws were too stringent and the lax laws of the third world on the other hand, offered wide opportunities for such testing.

The Ford Foundation, which had earlier showed interest in population control through other organisations now took a bold step. It independently started organising population control programmes in the third world, with its first programme being in India in 1959 (Ford Foundation, Report 60).

In 1956-57 the Indian government showed great resistance to private organisations aiding the family planning programme, although they accepted in principle the need for population control. But in 1958 faced with financial crisis the government's resistance broke down a little. India called for development aid from foreign countries which brought in aid first from the Ford Foundation that year and Bonnie Mass has stated that in 1959 India received 9 million dollars for publicity and campaigns for population control (Mass, 1978). Later others came with aid for agriculture and small industrial development. Along with development aid came assistance for population control. Various Universities departments of Economics were aided by the Population Council to start teaching demography.

One notices a strange situation here: the Indian government allowed the private organisations to directly carry out certain population programmes but did not itself get totally involved in the programme. However it began to show a keen interest in implementing population programmes. Several demographic training and research units were started by the government and plans were made to carry out empirical research on contraceptives previously tested by FPAI in their clinics. Oral pills and different methods of sterilisations were tested by the end of the plan.

The government expenditure in the second plan was ten times more than that in the first plan. This may have been a result of increases in foreign aid for FP after 1958. One also notices that after 1958 the private voluntary agencies were getting more funds from private organisations and increased their activities. For instance, FPAI started more programmes as its funding organisation the IPPF got 66600 dollars from the Population Council in 1959-60 (UN, 1968).

Third Five Year Plan : 1961-66

With the continuation of the cold war, came a tremendous investment in defence all over the world. Economic stagnation and inflation pressures hit the

first world. As a chain reaction third world countries were the most affected. The UN economic survey report of 1963 indicates the widening gap between the first and the third worlds. All this affected private organisations and they became more interested in selling the idea of population control. They attempted to involve the American government, but president Eisenhower rejected family planning (Wiessman, 1970). Many writers persisted in their argument that Vietnam and other liberation wars of Asia, Africa and Latin America were the result of overpopulation. Therefore population control activities were most essential in the third world. Still others stressed that the widening gap between the first and third worlds was due to third world overpopulation. (Berelson, 1964).

The growth of pessimistic thoughts about the overpopulation of the world caused some of the private organisations of USA for instance Draper, Moore, Harper & Row, Cass Canfield and Rockefeller to set up the Population Crisis Committee which was the political action arm of the Population Control movement. The US government officials served as representatives in the above committee (Wiessman, 1970). With the consent of President Kennedy, Richard Gardener was allowed to offer aid for the Population Control Programme of the UN marking the beginning of US government aid to population control (Chandrasekhar, 1969).

With a programme from J D. Rockefeller III, the White House gave a 'New Look', to foreign policy. USAID made birth control a part of foreign assistance and permitted President Johnson to judge a nation's "self help' in population planning as a criterion for giving Food for Freedom Aid. Developed rich nations thus directly pressurised underdeveloped poor nations through economic aids which the poorer nations could not refuse (Wiessman, 1970).

In India, by the end of the second five year plan it was realised that the economic plan targets were difficult to reach, secondly the policy resulted in widening the disparity in people's living standards. (Report 1960-61). In 1962 the Ford Foundation advised the government to take up the extensional approach ie to carry FP service to the door of the client through mobile units camps and clinics. Besides Ford the other major donor to the Indian Voluntary agency FPAI was IPPF whose joint secretary was Dhanvanti Rama Rau. The Ford Foundation and FPAI experimented with mobile units and sterilisation camps and IUCD, initiating the period of bio-medical testing in India. (Ford Foundation, 1961-66).

India was the first country in the world to experiment with sterilisation and its result was utilised to formulate a sterilisation programme for the world (Population Report 1973). The government at the beginning of the plan paid no heed to the recommendations of the Ford Foundation but later in 1963 with the increased economic crisis, accepted 'the extensional approach' (UN India, 1966). Was the government's willingness to permit experiments by foreign institutions before its acceptance of the programme due to a fear of mass reaction, or was it due to foreign pressure ?

Thus we see that the private bodies gave up doing research in demography and moved directly to support action programmes. The money allocated in the third plan by the government was forty times greater than that in the first plan and foreign private agencies contributed more money to family planning. In this plan period, although the reports do not clearly indicate the relative proportions of foreign private aid and multilateral aid (Health Directorate Report, 1961-66).

The Three Annual Plans : 1966-69

The prolonged war in Vietnam continued to drain US wealth, while severe inflation hit many countries of the first world. The painfully slow rate of economic growth was noticed not only in India but in all the third world countries. Population control continued to siphon off funds from development. As a result of this, all the food shipments of USA "Food for Peace" programme under PL 480 aid to the third world had to be expended on Family Planning ie birth control programmes (Cleaver, 1973) USAID and many suspectedly private organisations moved to give population control a more international touch.

The Ford, Rockefeller, Moore and other foundations began to give larger donations to the international agencies resulting in larger budgets for the Population Council and IPPF. Among their many activities was especially encouraged the distribution and testing of contraceptives. In 1966 the Population Council went on to emphasise the use of Lippes' loops which had already been discarded in the west. They were either donated freely as aid to the third world countries or else loans were granted for their purchase or were manufactured in third world countries. In India, the Population Council funded the opening of the Lippes' loop factory at Kanpur, the

machinery for which was sold to the government by the Council (Population Council, 1966).

USAID donated assistance in cash and kind for population control along with development and food aid to India. In April 1966, the Population Council's bio-medical division continued to fund the testing of contraceptives and launched the International post-partum family planning programme. This was to start more direct FP assistance through a hospital base to all women who came for delivery or for Medical Termination of Pregnancy (MTP). (Mass, 1978). Although the acceptance of family planning appeared voluntary, the very fact that it was linked with delivery and abortion facilities detached it from the free will and volition of both the women as well as the hospitals that opted to receive the programme funds. But until 1969 funds for the post partum programme did not reach India (UN Report, 1970). Today this post partum programme has resulted in the acceptance of family planning measures being made a pre-requisite for obtaining medical treatment for deliveries or abortions. Thus a strange form of "compulsion" was created not overtly, but by skillfully narrowing down choices for women.

Faced with growing opposition from third world radicals and nationalists, private monopoly houses tried to move more cautiously. Through the UN a multilateral touch was given, by making family planning a human right in December 1966, adopted by 12 countries and later by all UN countries within a year. This resulted in the WHO, UNICEF, ILO, ECAFE and UNESCO directly donating funds for family planning and supplying contraceptives (UN Assistance 1968). In 1967 the United Nations Population Trust Fund (UNPTF) was formed whose major financial resources came from US donors and the USAID. In 1969 UNPTF became the UN Fund for Population Activity - UNFPA - and by the seventies, UNFPA dominated population control activities in the world (Mass,1978). With growing antagonism USAID routed its funds through small as well as better known organisations such as Pathfinders and the IPPF. Private voluntary agencies in the third world were also willing to use their good offices to put to test oral contraceptives and experiment with the effectiveness of various delivery systems of family planning in their respective countries (OFECD, 1975).

In India The Third Five Year Plan was greatly lagging behind in its targets in 1966. The country was faced with another great economic crisis resulting in a severe drain on it foreign exchange. During this period it is interesting to note that the "Development Aid" was bracketed with the family planning programme. The USA instead of signing annual or multiyear (food) sales agreements deliberately doled out food only for a few months at a time to ensure, through pressure, that family planning programmes were carried out. One notices that aid from USAID was the greatest to India during this period. It not only supplied money and PL 480 funds (such as oral pills in 1967-68 and then condoms for the Nirodh Marketing programme for testing as well) USAID in 1966-69 donated funds to start the "Intensive District Area Programme" providing nutrition programmes along with family planning. By 1968 SIDA, DANIDA and Japan signed the bilateral contracts with the Indian government and supplied contraceptives and equipment for family planning services (Ford Foundation, 69). Private organisations like the IPPF, Pathfinder and the Population Council which function through voluntary organisations tested IUCDs of different types and shapes oral pills were tested and sterilisation experiments were conducted in their voluntarily-run clinics, hospitals or dispensaries.

One notices that with each plan the priority accorded to the different methods of contraception has changed. In 1966-67 the government's stress was on IUCD; in 1967-68 sterilisation was officially emphasised and in 1968-69 it was Nirodh (Ministry of Health-Family Planning, 1966-69). Were these changes made by the government as a result of mass demand ? or were they the result of the supply of contraceptives as part of the external aid as India did not produce them indigeniously (UN,1970) ?

The government allocated in the first annual plan Rs. 149.30 million, in the Second annual plan Rs. 310 million and Rs. 370 million in the third plan for family planning. Incentive schemes were given emphasis in the second and third plans. One notices nearly a 100 percent rise from the sum allocated in the first annual plan. In this plan period almost 84 percent of the allocated funds were spent (Ministry of Health, 1966-69). This may have been a result of USAID compulsion to expand the FP activities and the PL 480 funds or it may be because the incentive schemes were offered to the acceptors and promotors of family planning. The most prominent trend in this period is the increase in direct involvement by the first world countries and the UN, instead of only private monopolies and their international organisations. With this the pressure for acceptance of family planning by the third world, especially by India, becomes greater and more rigid.

This desire for limiting population led to a marked increase in bio-medical testing to discover "the best contraceptive". In many cases women were not even aware that their bodies were being used for experimentation since they had approached the clinics for other medical treatment. Worse still others, because of financial incentives, sold their bodies to be used as "guinea-pigs" for experiments, the result of which could not be guaranteed; doctors themselves could not often predict possible reactions (Scheuer, 1972)

Family planning now became a goal to be reached, a tempting solution to the financial crisis and thus the human element was completely ignored. Protection of basic human rights, especially the rights of women, which the UN proposed as the aim of this programme, were completely ignored.

The Fourth Five Year Plan : 1969-74

The green revolution in certain parts of the world increased food production; but the Vietnam was continued to drain USA's public investments and world-wide inflationary conditions instead of improving had further hiked prices. Liberation wars and guerilla movements developed in the third world. All these conditions moved the private and government donors of the first world to loosen their purse strings for population control activities still further. During this period we see that the development aid increased in absolute terms but one can observe that the rate of growth for population control aid was much higher as compared to that in 1961. Development aid increased from 5200 million dollars to 7800 million dollars. Population assistance rose from 6 million dollars to 198 million dollars (UNFPA, 1974). In 1969 President Nixon in a revealing message to the committee of the White House stated that the UN, its specialised agencies and other international bodies should take the leadership in countering the problems of overpopulation in the third world and that the US should co-operate fully with such programmes (Singer 1971).

All this created a climate for symposia, conferences and debates on the population problem. The chief cause of every problem was seen as over population. Economists worked out the cost-benefit analysis of population control investment versus development investments insisting that the former was more beneficial than the latter. The World Ban received for the first time donations from the US and other first world countries for activities in population control. Under the leadership of Robert McNamara it frantically called for population control and assigned from its budget 27.0 million dollars in 1973 (World Bank) in India. The World Bank started population project in Rajasthan and Andhra Pradesh in 1974.

USAID, faced with objections from many third world countries rechanneled aid through multilateral and a few private international agencies. By 1973 100 million dollars of AID Funds entered the developing countries once again through private organisations for population control activities. By 1971 many new private organisations such as Family Planning International Assistance, Association for Voluntary Sterilisation, Asia Foundation and the International Confederation of Midwives had been founded. Pathfinder, a private organisation receiving funds from USAID had by 1973, 35 projects in 44 developing countries which were funded directly by private organisations and not by governments of the third world countries. IPPF in 1973 launched programmes to integrate family planning with rural development and when its activities expanded, it received increasing recognition by government. (USAID, 1973).

USAID was very keen on promoting bio-medical research and in developing new contraceptives. It donated 3 million dollars in 1970 to the Population Council to develop the "once a month-pill" and the Indian Council Medical Research Unit cooperated in testing in India (USAID, 1973).

In-mid-1971 when the New York Population Council started its International Committee for Contraceptive Research (ICCR), in India a Contraceptive Testing Unit (CTU) in Delhi with 14 centres in different cities of India was set up. This duplication was unnecessary as already there existed the Institute of Reproduction in Bombay which had its centres in major cities of India. The ICCR tested intra-uterine device on 50,000 women over a period of one year. The ICMR has conducted research on various intra-uterine devices and hormonial contraceptives. About 50,000 women are estimated to have taken part in these tests for the ICCR.

It is interesting to note that the population control activities which were started in 1952 by foreign powers with the sole emphasis on demographic research were transformed by the 70s into direct population control of the third world people. IPPF was the only international private organisation whose budget rose very fast as this organisation concentrated on family planning activities and worked on a voluntary basis in third world countries. But the budget of other private agencies like

Rockefeller, Ford Foundation did not increase and private organisations and USAID started donating more liberally to IPPF.

India, despite enjoying some fruits of the Green Revolution due to an increase in food production, could not check the growth of poverty and unemployment. The inflationary crisis continued to increase as well. World-wide inflation had further worsened her economic conditions. The Indo-Pak war for the liberation of Bangladesh further upset her economy and in 1971 the Indo-Russian pact strained her relations with USA triggering off other repurcussions.

The family planning programme was again given the highest priority and the population policy became in principle more ante-natal. Upto 1970-71 USAID and Ford Foundation had given major support for family planning. Their consultants advised the Planning Commission, the Health Ministry and the ICMR. When relations with the US were strained USAID and Ford Foundation were asked to wind up their population control units and their aid ceased to flow (Seal, 1974).

After a little lull in donations in 1971-72 funds from multilateral organisations and other governments were gradually stepped up. One sees SIDA, CIDA, UK and Norway donating large funds to support the building of the National Family Planning Institute in Delhi and some research on nutrition and health programmes in India. UNFPA, ILO, UNICEF and WHO, whose activities were limited in India gradually became the major donors. Both private and multilateral bodies were heavily supported by the USA. By the end of the plan an experimental area development scheme — India's first population project — was launched by the government with aid from the World Bank, IDA and SIDA. When USAID stopped functioning directly, many voluntary private organisations like IPPF, AUS, Pathfinder Fund, FP International Assistance, Christian Church Associations, and the International Red Cross started funding small voluntary organisations in India and thus many rural and urban clinics, hospitals and dispensaries were opened. The organisers were invited for seminars and conferences abroad and they were donated contraceptives and money. Many organisers came back and stressed sterilisation and offering incentives like radios, buckets, sarees, transistors.

In the Fourth Five year Plan Rs. 315 crores were allocated but government expenditure after 1972 reduced as USAID and Ford Foundation found themselves in disfavour at the government level as a result of the Indo-Russian pact. The USAID policy statement indicates 'AID recognised early that many instrumentalities would need in helping developing countries to attack their problems of population growth. Direct assistance could be helpful in those countries receptive to the bilateral approach. In some others however, assistance from multilateral agencies and from private organisations appeared to be more welcome — thus USAID shall help multilaterals and private organisations and they shall work independently".

The Fifth Five Year Plan : 1974-79

The decade of the Seventies began with a further upset of the already deteriorating world economy — the oil crisis hit the western world. At this crucial period in 1974, the World Population Year was celebrated and the activities of population control expanded. The first international conference on population sponsored by the UN was held at Bucharest. Various proposals and plans of action were put forward which would drastically reduce birth rates in the third world Planners of the conference were confident that they would be able to strike an agreement on 'plans of action' for family planning. Surprisingly third world countries formed a powerful block and opposed the US experts' 'plan of action' intended to stabilise the third world's population growth, treating birth-control as a factor which could be detached from the health and well-being of the women, family and society. Many of the socialist countries protested against what they considered the absurd theory of "population explosion." They felt instead that development would itself bring down the birth-rate. (Mass,1978) Experience had shown that poverty was the main factor responsible for over-population. Hence they argued that to insist that family planning was more important than development was to see the problem from the wrong end.

The social and political consciousness of the third world made it necessary that population programmes of the future would have to be couched in more subtle terminology. In order to make it palatable to the third-world recipients John D Rockefeller II was the first to put population planning in a developmentalist framework. He argued that population programmes and overall development programmes should indeed go hand in-hand. "We recognised that reducing population growth is not an alternative to development, but an essential part of it for most countries" (Mass, 1978).

Though there was a protest and an apparent setback for imperialists at Bucharest, the working group of the conference comprised representatives from many countries who chose to make the final draft. They voted to retain neo-Malthusian 'target' figures which proposed that the birth rate of the underdeveloped nations be reduced to an average of 30 per thousand by 1985. Despite the vehement protests of the third world, the end results of the report of the conference were heavily influenced by the opinion of the first world.

The Population Council concentrated on its bio-medical testing even after 1975. Till 1975 the International Committee for Contraceptive Research carried out tests on 12 new potential fertility control methods. However, faced with objection in the third world the Population Council handed over the post partum projects to UNFPA and donated large funds to it (Mass, 1978).

The Pathfinder Fund with a budget in 1965 of 100,000 dollars expanded in 1975 to 3.5 million dollars and supported approximately 150 studies in more than 40 countries. Its office in New Delhi which was set up in 1964 was later closed down (Mass, 1978).

By 1975 the Family Planning International Association funded by the Planned Parenthood Federation of the American IPPF and other voluntary world church organisations, services aided by USAID became the single largest source of contraceptives and other family planning supplies to the third world. Nearly 1000 church related hospitals, clinics, dispensaries and private groups were supported.

The Co-operative for American Relief Everywhere (CARE) began by 1970 to support birth control and by 1975 gave birth control the highest priority. Many other private organisations like OXFAM (England, Canada), Christian Aid (England), Asia Foundation, American Voluntary Association for sterilisation supported family planning ie birth control as their highest priority projects (UN, 1979).

UNFPA whose activities expanded in 1974 and which was in charge of the world conference split up its global role of population assistance into three phases by mid-1976 : (1) Traditional technical assistance-transfer of technical know-how (2) Financial support to assist government and non-government bodies to expand activities. (3) Phasing out of assistance or foreign experts at the country level which will expand the programme.

India's economy suffered grave setbacks due to world inflation. In response to the Bucharest conference, assistance from the UN, as well as voluntary organisations took a more subtle form and was linked with rural development, child care and nutrition. For example, families accepting birth control were given free tube wells, free meals, or free maternity and child health benefits. The government too accepted this approach and integrated family planning with nutrition. This can be seen as a method of making family planning a prerequisite for nutrition benefits from the government.

Meanwhile, after the 1971 war, political consciousness was reaching a new peak with mass peasant uprisings throughout India. The movement by Jay Prakash Narayan was to have important consequences for the future. The political overtones of this and other movements and the insensitivities of the ruling party led to the declaration of the emergency and the upsetting of the five year plan.

In 1976 the central goverment in an important move to make state governments accept the family planning decided to freeze the population based at the 1971 level for the next 25 years for determination of representatives in the Lok Sabha and state legislatures. This compelled the leadership of many of the states to accept compulsory sterilisation and offer incentives viz. Rs. 150/- if performed with two living children, Rs. 100/- if with three living children and Rs. 70/- if performed with four and more (Times of India, 1976). Maharashtra declared that government servants who were not sterilised and had more than two children would not be given ration, housing facilities, or free hospital services (Times of India, 1976). To add to these frightening and unjust disincentives, in the Pune Municipal Hospital a sick person was not admitted unless and until one family member was sterilised and produced a certificate. All these measures led to great opposition to family planning among the public and to the Congress regime and the Congress was voted out of power. With the advent of the Janata Party, Raj Narayan, the Health Minister modified the Population Policy. He eliminated all forms of compulsion and gave family planning a new dignified name — family welfare programme, which in substance remained the same.

In this plan as compared to the earlier one, Rs. 497 Crores were allocated. The major donors during the Fifth Plan were UNFPA — 40 million dollars; World Bank — 21.2 million dollars, and SIDA — 10.6 million dollars.

With more funds coming in, the expenditure rose in each successive year. For e.g. in 1976-77 it increased almost to Rs. 16793.89 lakhs mainly due to the so-called incentives for sterilisation and IUCD programmes. Although it increased during Janata regime there was a fall in the expenditure and surprisingly enough, the external aid received during those last two years of the plan exceeded earlier donation. This was because during the Janata regime, "family welfare" (nutrition, child welfare, post-partum programmes) were used as a bait. Before the sixth plan began in 1980 a year passed without a five year plan but activities on Family welfare increased during this year.

The Sixth Plan : 1980-85

With the world situation remaining practically the same, with increasing recession, the emphasis on the need for population-control continued. Bilateral aid, earlier rebuffed, was now welcomed by the Indian Government. Permission for adoption of villages in the third world by the UN and by the World Bank was now extended to bilateral organisations like USAID, CARE, SIDA and others. In India too this became a common feature. Monetary crisis has made India sign a development pact with many First World countries. Although the total figures of external aid was not available, the Indian government allocated Rs. 1010 crores for family welfare of which Intensive District Development (ie development of primary health centres and family planning in districts by multilaterals and bilateral units) accounted for nearly Rs. 225 crores (UN, 1980-81). The India Population- II programme of Intensive District Development based on the experience of Population-I programme was extended. Their aim was "to promote family welfare to lower the fertility rate through the creation of facilities for integrated delivery of services for health, nutrition, MCH, contraceptives and medical termination of pregnancy, closer to the homes of people particularly in rural areas" (USAID, 1980-81).

The external aid for India Population Project-II has involved many donors The multilaterals UNFPA and the World Bank consented to support projects in 18 districts with 95 million dollars. Performance Budget, 1980-81). On examining bilateral involvement one finds that USAID which had stopped donating for the family planning programme since the Indo-Soviet pact of 1971, agreed to donate 40 million dollars supporting 12 districts and the above project is still being implemented (USAID paper, annexure). Further UK and DANIDA who had earlier supported the sterilisation programme and National Health and Family Welfare Centre building funds, donated 63 million dollars to carry out family welfare and health programmes in 15 districts (Performance Budget, 1980-81).

It is not easy to get statistics on the foreign contribution to family welfare but one is aware that a good quantity of Copper T manufactured by the Population Council has reached India, and today besides sterilisation, this is the foremost method of family welfare adopted by the government for which substantial incentives are being given.

The state of Maharashtra which was declared as the foremost in the use of Copper T for three consecutive years was exposed in a racket uncovered by the Indian Express (1984). The number of eligible couples in Maharashtra, were found to be much less in number than the acceptors of Copper T ! When the government field surveys for inspection were conducted, it was found that nearly 25 percent of the copper Ts inserted ie 726 lakh Copper T inserted, worth four crores were fictitious cases.

The annual reports of ICMR indicated that the Population Council, Ford Foundation, and WHO continued to give funds for bio-medical contraceptives research. The FPAI received laproscopes from IPPF in 1979-80 and organised camps in rural areas. For example a welfare organisation in the village of Tara, used laproscopes in Raighad District while the taluka hospital had none. A demand for laproscopes was made. Thus by 1984 almost all districts of India, especially in Maharashtra, got laproscopes.

In 1970 the direct involvement of Ford Foundation which had started since 1959 was stopped. In 1971 JRD Tata founded the Family Planning Foundation of India (FPFI) and the Ford Foundation stepped in as one of its major donors. (Ford Foundation, 1980).

The FPFI by 1972 took up action-cum-research projects, demographic research and later biomedical testing of contraceptives. The activities which were initially directly handled by the Ford Foundation were now aided by it. Its role thus remains important even today, and its philosophy continues to influence the Indian population policy. In 1979 the Ford Foundation donated 700 000 dollars ie almost 50 percent of the FPFI's total budget (Ford Foundation, 1980). Though the acitivities of the Family Planning Foundation began during the Fifth Plan period, it was only during the sixth plan period that it took on a more prominent role to carry forward the philosophy of the Ford Foundation by organising and founding seminars, conferences, action research. etc.

Table 1

Nature of Assistance of Imperialist Powers to private voluntary organisations and the government for Family Planning Programmes and central government plan allocations :

The following data has been tabulated to (a) understand why the population policy has undergone changes and (b) to find out what the impact of the external assistance ie. private, government and multi. lateral (2) has been, and (c) how and in what way it has affected Indian programmes.

Phase	Plan Period	Donor Agency to India	Recipient Agency in India	Central govt. allocation for FP
I	Pre Plan 1947-1952	Private	Private	British government had no programme
II	First Five Year Plan 1952-1957 March	Private Multilateral	Private Government	Rs. 65.00 Lakhs
III	Second Five year plan 1957-61 March	Private Multilateral Private	Private Government Government	Rs. 479.00 Lakhs
IV	Third Five year plan 1961-66 March	Private Multilateral Private Government	Private Government Government Government	Rs. 269.70 Lakhs with provision for Rs. 500.00 lakhs
V	Three Annual Plan 1966 to 1969 March	Government Private Multilateral Private	Government Government Government Private	Rs. 750.01 Lakhs
VI	Fourth Five Year Plan 1969 to 1974 March	Governments Multilateral Private Private	Government Government Private Government	Rs. 3150.01 lakhs
VII	Fifth Five Year Plan 1974 to 1979 March	Private Multilateral Private	Private Government Government	Rs. 4970.00 lakhs
VIII	1979-1980	—	—	Rs. 1180.00 lakhs
IX	Sixth Five Year Plan 1980 to 85 March	Multilateral Private Private	Government Private Government	Rs. 10100.00 lakhs

Note :- Figures of Donation received not indicated as assistance is in cash and kind.

Source :- Data collected from various yearly reports of :

1) Population Programme Assistance United States Aid to Developing Countries; 2) Reports of the Ministry of Health; 3) Annual Reports of the Directorate General of Health; 4) Annual Reports of the Ford foundation; 5) Annual Reports of the Rockfeller Foundation; 6) Annual Reports of the Population Council; 7) Annual Reports of the International Planned Parenthood Federation; 8) United Nation Funds fo Population Activities; 9) Aid for Family Planning pamphlet by Emerging Population Alternative. (Mimeograph)

Summary and Conclusion

In the pre-independence period the efforts of birth control were carried out by a few concerned individuals in India. A couple of foreign organisations funded Indian birth control clinics. There was no state level movement.

In the First Five Year Plan the Government accepted family planning as a programme. The major emphasis particularly in the early years lay on the rhythm method, due to the diffidence of the government. Private organisations funded generally by private organisations were free to propagate other methods.

In the 60s the increased economic crisis, the shortage of food, the growth of liberation movements brought first world governments to focus their attention on the importance of population control to avoid major social and political upheavals. Development aid was increasingly linked to population programmes and there were an increased aid flow from governments of the First World to the governments of the third world.

In India, the programmes of voluntary organisations served as important pointers as to what direction the government policy would take. It was also their advice and donation which compelled the government to change prescribed contraceptives during each plan period. It gave or promoted what it received and tested what it was asked to as the economic crisis made them helpless and forced them to accept assistance which led often to indebtedness.

After the World Population Year, 1974, the approach has again changed. It is now recognised that development is essential for birth control programmes to make a headway. Thus increasingly the trend is to support 'integrated' projects which include health, nutrition, and development. Multilateral and governmental aid have become the major source of finance for the Indian govenment though it still remains to be analysed whether these programmes are development oriented or whether they are basically family planning programmes with merely an acceptable cover.

The point of this article, is not merely to criticise the idea of birth-control itself which should be available to women as their basic right. This paper is also aimed at examining the history of the fallacy that family plannining is a solution to the problems of poverty, underdevelopment and unemployment. Has the bogey of overpopulation been created by the leaders of the first and third world countries and exaggerated merely to divert attention from the real problems facing them ? More important have the woman's basic needs been forgotten in the quest for ever-higher targets of achievement in family planning measures? Do we in the Third World want a reduction in the birth rate, at any cost ?

NOTES

1. *Performance Budget* 1977-78 Ministry of Healh and Welfare Government of India P. 184 "The expenditure on the family welfare programme is basically met out of the national exchequer. Some assistance which forms a small proportion of the total expenditure on the programme is received by way of international cooperation from some of the international agencies".

2. *Private Donors* to India are most often the monopoly houses or its funded voluntary organisation. Many of these voluntary organisations are also funded by government aid agencies eg. The Ford Foundation, the Rockefeller Foundation, Hugh Moore Foundation, International Planned Parenthood Federation, Population Council, Pathfinder Funds,Medical Christian Association, International Red Cross, Peace-Corps, OXFAM, Population Crisis, Voluntary Sterilization Association and other private receiving agencies, Family Planning Association of India, The Family Planning Foundation, Indian Red Cross, various Rural & Slum Developmental Agencies, Gandhigram Institute etc.

3. *Multilateral Donors* are the agencies funded by more than one monopolies and governments such as bodies of United Nation and recently the World Bank eg. WHO, ECAFE, UNICEF, UNFPA, IDA and others.

4. *Bilateral-Government* - First it was USAID United State Aid to Developing Countries, NORAD Norwegian Agency for International Development, BODA British Overseas Development Assistance, SIDA Swedish International Development Authority, DANIDA Danish International Development Agency, CIDA Candian International Development Authority, France, Japan, Korea, Finland, Representative of Germany, Australia.

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POLITICS OF THE BIRTH CONTROL PROGRAMME IN INDIA

sucha singh gill

The myth that projects population control to be the cure-all for all social and economic problems has a class bias. According to the author the emphasis of our planners on population control is an attempt to weaken the class struggle in India by absolving the exploiters of the responsibility for perpetuating inequalities and shifting the blame from the capitalist order to the people. The article deals with two major issues in the family planning programme (i) that overpopulation is a major cause of poverty and (ii) that persuading people to accept the small family norm is the only way that population growth may be controlled. It examines the socio-political content of these issues and emphatically suggests that eardication of poverty and unemployment, and guarantees against insecurity, sickness and the death of children must be demanded as a prerequsite for accepting the small family norm.

For the last many years the family planning programme has overshadowed all aspects of our social life including the development of health services. In fact health services have been oriented drastically to suit the needs of this programme. All activities of the health institutions and their staff are subordinated to the fulfilment of family planning targets. While assessing the work of the health staff including the doctors, the only criteria has been performance in family planning work. Their annual confidential reports, efficiency bars, transfers, rewards and punishments are all based on the achievements of this programme.

The family planning programme is getting nearly as much budget as the entire health sector which contain programmes of equal or even more importance. During the 1974-79 period the health sector was allotted Rs. 681.66 crores and the family planning programme received 645.00 crores. In the sixth plan the health sector and family planning programme got Rs. 1821.05 crores and 1010.00 crores respectively[1]. Later on during the time of mid-term appraisal Rs. 68.00 crores were shifted from the general side to the family planning programme. (Planning Commission, 1983). A population Advisory Council was also set up under the chairmanship of Health Minister to keep population control under close watch and advise the government on policy matters. The 13th item of the new 20-Point Programme is specifically related to popularisation of family planning programme with the people. (Planning Commission, 1983). This renewed emphasis on the population control programme intends to achieve the long term goal of planning to reduce birth rate from 33 in 1980 to 21 per thousand in 1995 and increase the couple protection rate from 22.5 percent in 1980 to 36.6 percent in 1984-85 and 60 percent in 1995.

Although the programme is given the name of family planning and lately, family welfare, in essence it remains primarily a birth control programme. This is evident from the fact that as compared to Rs. 1078 crores allocated for family welfare programme in the Sixth Plan only Rs. 250 crores were for nutrition programmes (Planning Commission, 1980). The programme is not linked up with important aspects of future plans necessary for the welfare of each family such as education of children, their employment, security of family against sickness and old age or rehabilitation of the destitutes. There is no provision in the programme to protect the family against economic, social and psychological insecurities being increasingly generated by the socio-economic dynamism of Indian society on the capitalist path. In this situation the family planning programme remains as an intervention by the government only to limit the number of children through birth control measures.

However what matters most for individuals who plan their families is a better future. They want to improve the economic and social status of their family through education and employment of their children and accumulation of non-human assets. Both these assets human and non-human, are a guarantee against sickness, old age and destitution in addition to the psychological satisfaction. Obviously, they need a minimum number of children particularly male ones for this purpose. Nothing is done where actual planning is required and couples are left on their own, unprotected against various types of insecurities. Thus family planning or welfare programme is a misnomer and emerges prominently as a birth control programme.

The Poverty-Overpopulation Myth

The Population control programme is one of the key programmes in India. Indian planners view the

limiting the growth of population as one of the main objectives of planning. In the words of the planning commission, " it is almost axiomatic that economic development can, in the long run, bring about a fall in fertility rate. However developing countries with large population cannot afford to wait for development to bring about a change in attitude of couples to limit the size of families as the process of development itself is stifled by population growth". (Planning Commission, 1980). During the emergency (1975 77), a naked expression of this hidden message of the Planning Commission was seen. The poor people were forcibly sterilised in huge numbers and in a manner worse than animals because the government and the Planning Commission could not wait for a change in their attitude.

The success of development planning and particularly solution of major economic problems such as poverty and unemployment have been linked up with the success of population control programme. Planning Commission states, "All plan projections of reduction of poverty and unemployment will go wrong if success is not achieved in containing the growth of population". (Planning Commission, 1980)

This policy of the government to control population has a class bias (Banerji, 1971). Indian society is a class divided society. Rural and urban poor belong to oppressed classes — poor peasants, tenants, artisans, agricultural/industrial proletariat and others engaged in a number of odd jobs. These poor people have a very weak material base and are deprived of the means of production. They live on their family labour. Their greatest asset is their labour power. It is the sole source of their income, prosperity and security against old-age, sickness and other adverse circumstances. The poor people without children generally become beggars and destitutes in their old age as there is no institutional arrangement in our society to look after them. The material need of the poor to have more children is more acute as compared to the rich.

A number of studies in India show that among the poor households poverty is not caused by the large family but rather, it provides some relief against it (Mamdani 1972, Mamdani 1976, Nadkarni 1978). The poverty of the poor households originates from their poor command over the productive resources such as land and capital assets. According to agricultural census 50.62 per cent holding with less than 2.5 acres of land operated only 8.97 percent of total cultivated area. On the other hand, the top 15.17 per cent of the holdings with more than 10 acres of land operated 60.63 percent of the area in 1970-71. Almost the same trend is observed from data about 1971-72 from the 26th round of National Sample Survey (Laxminarayan and Tyagi, 1976) Land is the most prominent asset in the rural areas and it accounted for 66 per cent of the total assets in rural India in June 1971. According to the Reserve Bank's All India Debt and Investment Survey (RBI, 1971-72) 9.34 percent of rural households were landless and 27.63 per cent of the household owned less than 0.50 acre of land. According to this survey the top ten per cent of the rural households accounted for 50.56 per cent of the total rural assets (Basu 1976). The distribution for assets in urban areas is even more skewed with major part of the private corporate industrial structure being under dominant control of top monopoly houses (both Indian and foreign). Thus the poverty of the poor families emanate from their weak material base rather than family size.

In the same way unemployment in society cannot be explained in terms of population growth. It can be explained only in terms of management and development of the economy on capitalist lines. The dynamism of capitalist development produces large scale unemployment. Marx points out, "the labouring population therefore produces, alongwith the accumulation of capital produced by it, the means by which it itself is made relatively superfluous, is turned into a relative surplus population; and it does this to an always increasing extent. This is a law of population peculiar to the capitalist mode of production; and in fact every special historic mode of production has its own special laws of population, historically valid within its limits alone". Even in professional jobs like that of teachers, doctors and engineers there exists unemployment, though there are a number of illiterate persons needing teachers, sick people in need of doctors and a large number of projects needing engineers. In a capitalist economy resources are directed towards profit maximisation rather than towards social usefulness. Many resources including an unemployed labour force can be socially useful but remain unutilised for want of profitability. Unemployment is a typical characteristic of capitalist development. It is not due to high population growth. In capitalist economies there is a fundamental right to property but no such right to work.

The emphasis of Indian planners and policy-makers on control of population through birth control measures as a precondition for the success

of plan to eradicate poverty and unemployment is an attempt to conceal the basic causes of these problems. It is an attempt to project population growth as the villain of every problem in society. This tries to conceal the root cause of such problems that is unjust socio-economic systems. It helps in diverting attention from the exploitation of society being carried out by multinationals in collaboration with local monopoly (and non-monopoly) capital, exploitation of labour by capital (both in industry and agriculture), and exploitation of tenants and peasants by landlords, moneylenders and traders. It is this system of exploitation which is responsible for a shift of resources (income and wealth) from the poor to the rich and is the basic cause of poverty. The control of the exploiting classes over state power to maintain the existing system of socio-economic organisation of society on capitalist lines is the basic cause of unemployment and other problems of Indian society today.

Poverty and Family Size

Family size is the only asset which the poor possess and it provides them income and security of various types. Since the family size and from it the family labour is the mainstay of the poor, they have a greater need for children. Added to this is the fact that the survival rate of children in India particularly in poor families is low. In 1971 infant mortality rate was 129 per 1000, 138 for rural and 82 for urban areas. In 1978 Infant mortality rate was 126-136 for rural and 71 for urban areas. Inspite of the wide claims of improvements in the health services the infant mortality rate has not gone down, particularly for the rural areas, where three fourths of India's population resides. The infant mortality rate though slightly low for male as compared to female is quite high in India. In 1978 it was 120 for male and 131 for female. Data on the infant mortality rate of different income groups/classes is not available. In their absence, let's look at the data of scheduled caste/tribe. Infant mortality rate in case of these two categories is higher than the average. In 1978, it was 152 for scheduled castes as compared to all India rate of 126. Similarly infant mortality rate in the women workers is high. It was 143 for farmers, fishermen, hunters, loggers and related workers; 150 for production and related workers, transport equipment operators and labourers. (Registrar General of India 1983). The magnitude of the problem can be judged from the fact that a fourth of the children in India die before attaining adulthood. Thus the survival rate of children is low particularly among the weaker sections and oppressed classes in India.

The socio-economic dynamism of society on the capitalist path levies very meagre resources with these sections. So they cannot afford medical facilities of their own. They are denied even the shabby public health facilities available in our country. That is the reason that most infant deaths below one year take place unattended by trained medical practitioners. Percentage of such deaths was 58.3 in 1978. The state of other necessities of life needed for good health is also deplorable. In India most of the people do not have facility of hygienic and clean drinking water. Even now 57.70 percent of the people are drinking water from wells and 5.31 percent from pond/tank and rivers. Only 34.35 per cent of population drinks water from taps and handpumps. (Registrar General of India, 1983) Average calorie intake in our country is 1880 which is even less than the minimum calories needed i. e. 2250. Inspite of three-fold increase in the food grain production our per capita consumption is stagnant since 1956. The poor do not get reasonable good diet, clean water and secure shelter in life. These factors are responsible for high motality rate in the children, thus the need of the poor to produce more, in order to get a minimum number of surviving children. Even in a prosperous state like Punjab, on the average 1.10 children per family had already died when a survery of the sterilised couples was conducted (People's Health Group,)

Childern are also source of income before their adulthood. Though child labour is legally banned yet a large number of children from poor families are labourers. Both in urban as well as in the rural areas children can be seen doing all types of odd jobs to earn wages or help in family work in productive activities. According to the Government of India survey 3.7 percent of the Children were full-fledged workers in 1978 — 4.2 percent in the rural areas and 1.5 percent in the urban areas. In the rural areas 4.8 percent of male children and 3.5 percent of female children were workers. About 80 percent of child labour were children of farmers, fishermen, hunters, loggers and related workers and 11.64 percent of production and related workers, transport equipment operators and labourers. Thus children belonging to the poorest families do not attend the school - but contribute to the family income. On paper children may be shown in schools but a large number of them from poor families drop out and

join the labour market at a very early age. In addition to being full-fledged workers a majority of the children, particularly in the rural areas, contribute significantly to the family labour. It is obvious that child labour can not be stopped by implementation of legislation but through material upliftment of the poor families in the society.

Apart from these economic factors, there are a number of social reasons why people need to have more childern, particularly male ones — emotional security, social status and continuity of family, are some of them. For these reasons common people have an urge to have more than one surviving male child in the family .Even in a relatively prosperous state like Punjab where a lot of people from the villages are employed in government and semi-government jobs, the average number of children after which the couple accepted sterllisation was 4.47 with 2.48 boys. The figures for the agricultural workers was a little higher i. e. 4.54 and 2.58 respectively (The detailed break up is shown in Tables I & II.)

Only four percent of the couples accepted sterilisation after two children — the norm recommended and propagated by the government. None of the agricultural worker's families accepted to stop after two children.

Table I

No. of Children per Family in rural Punjab (percent of couples already sterilised).

Category	No. of children/family					
	1	2	3	4	5	More than 5
In general	Nil	4	22	30	22	3
Agricultural workers	Nil	Nil	14	37	30	19

Table II

No. of boys per family in rural Punjab (percent of couples already sterilised)

Category	No. of boys/family				
	1	2	3	4	5
In general	7	48	38	4	3
Agricultural workers	7	42	40	9	2

Table III

Minimum no. of children they could imagine (Boys + Girls)

Boys Girls	1+0	1+1	2+0	2+1	2+2	3+0	3+1	3+2
No. of couples (percent)	Nil	2	4	66	21	2	4	1

In this survey which was carried out in the rural areas of Punjab 98 per cent of the couples could not imagine less than two boys for a family. This survey was conducted by the family planning staff whom the villagers always want to please by mentioning the least number of children there should be in a good family. Taking into account the average loss of 1.10 children per family, one can imagine that their desire to produce 4 to 6 children or 2 to 3 boys is not unnatural.

A family without a male child is still looked down upon and parents with one male child are still considered as blind in one eye. The two children norm propagated by the government is not acceptable to people at large. These are in fact, family norms of educated middle class. It is for this class that children remain a burden to be borne by families for a considerable period in India. They have to be reared, well-looked after, educated and even helped to get a middle-class job. In this way they have to be supported for 20-25 years before they can be of economic use to the families. That is the reason most of the middle class people have been following small family norms and not primarily because of family planning propaganda. It is worth mentioning that many of the countries have never propagated family planning and still their growth rate is almost nil. For example USSR had never launched a family planning programme of the type we see here in our country. Although that government always encourages its citizens to produce a number of children, half of the couples produce only one or two children.

It needs to be **reasserted that poverty is not explained by big family size but by the weak material base or by lack of productive resources at people's command.** The link between eradication of poverty, population control and the idea subscribed to by Indian planners, that the success of the former is linked to the success of the latter, is ideological. It is not based on a scientific analysis of our socio-economic reality but rather, it amounts to consciously making the whole thing stand on its head.

The idea of projecting population growth and large family size as the basic problem of society is an attempt to hold people responsible for their problems and exonerate the ruling classes from this responsibility. It is an ideology of the ruling classes to shift the blame of existing social and economic mess to the people in general. This 'ideology of victim blaming' is being widely used by the ruling classes in all fields of life to blur the rising consciousness of people. This fact, that the poor do not find the two child norm suited to them and therefore do not accept it is used by the rulers to attack the poor, an attempt to pre-empt the attack by the poor on rich.

Birth Control Programmes : A Subtler Form of Class Oppression

The rigorous implementation of small family norm and population control on the unwilling poor leads to the use of some form of open or tacit compulsion. The officials entrusted with the task of fulfilling the targets, compel the field staff to bring enough number of cases for sterilisation. The field staff uses various means ranging from incentives of financial help to the threat of officials and local influential persons to complete sterilisation targets. Given the unjust socio-economic system, such threats work only on the unorganised poor in the country. This take the form of direct class oppression of the poor, the worst form of which was faced during emergency period of 1975-77.

Sterilisation particularly of the women has mainly become the birth control method of the poor. The side effects are multiple. One is the development of complications arising out of sterilisations and even deaths of some women. Back-ache, pelvic pain and other problems make the women chronically ill. In a survey conducted in Punjab more than 80 percent of women complained of one or more problems after the operation. (People's Health Group). This adversely affects their capacity to work and consequently the earnings of the working class families. "For women of labouring class . . . tubectomies may be a dangerous intervention, productive of family conflict and tragedy: if it decreased the women's output then children are made to do her work, while, if she is forced to keep her economic activity at the same level, children then have no protection against either the hopelessness or savagery of her feelings". (Pettigrew, 1984). Therefore, tubectomy operations are not only inappropriate but harmful to working class families. For obvious reasons, doctors, engineers, lawyers, college/university teachers or bureaucrats hardly use this method. Nobody has ever asked those recommending tubectomy to poor women as to why they do not get their own women sterilised.

In this context birth control programmes not only becomes a political enterprise but a subtler form of class oppression. It hits them hardest but conceals the identity of the attacker. It directly transmits the class conflict into family conflict among the

poor. It is an attempt to blur the class conflict and hits the poor through control of their reproductive system. By thrusting upon the unwilling poor sterlisation and particularly the tubectomy operations make the poor economically weak and psychologically shattered. This reduces further their capacity to organise and fight against their oppression and exploitation. It is a way to dominate economically, politically, culturally and socially to perpetuate the system of exploitation. This leaves them ideologically confused, socially shattered, politically weak and psychologically perplexed. This is an offensive of the exploiters against the exploited to weaken them to avert the offensive. It is a serious attempt by the rulers to reduce the number of their enemies in order to reduce the risk to their oppressive regime. It must be emphasised and re-emphasised that too small a family among the poor is economically, socially and politically a weak family and is bound to affect their class strength. Therefore, pro-people elements in the society must understand that birth control programmes are a part of the ruling class strategy of repression of the poor in general. But this is presented as a programme of welfare of the people. This needs to be exposed as a thoroughly anti-people programme which affects the very vitals of the people. It operates at a very subtle level and intends to control the most senstive part of life that is, reproductive system.

The political nature of this programme must be made clear to the people. The failure of the ruling classes must not be allowed to be projected as failure of the people. The un-willingness of the poor to accept the two child norm of the ruling classes must not be allowed to be used as a pretext to use frank and hidden compulsions against the poor. The eradication of poverty and unemployment and guarantees against insecurity of old age, sickness and death of children must be demanded as a pre-requisite for accepting the small family norm. The impatience of ruling classes to thrust birth control programmes on the poor even with coercive methods before even attempting to solve the socio-economic situation which make a large family desirous needs to be understood and opposed. The only check against this on-slaught is through the conscious organised force of the poor.

— **sucha singh gill**

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Just Out

The Political Ecology of Disease in Tanzania
by Meredeth Turshen

Rudgers University Press Diotribution Centre, P·O. Box 4869 Hampden Station, Balfimore MD 21211, USA,
25 dollars

The book looks at disease in Tanzania and argues that it is not the inevitable consequence of climate or geography but the result of colonialism and capitalism. Colonial rule changed the ecology and economy of the country, imposing frontiers that did not respect African settlement, bringing in new diseases, and starting wars of conquest that touched off epidemics. Women were particularly affected — their social position was lowered, their political power was eliminated, and their role as valued food producers was lost. After 1961 the new government tried to meet the basic needs of its people, and on some levels it achieved a measure of success but certain programmes, like the reorientation of the system of food production, were unsuccessful.

CONTRACEPTIVE RESEARCH IN INDIA

Testing on Women

kusha

Field trials to determine the efficacy and safety of a particular contraceptive are very often carried out in a dubious manner in the third world on women from the deprived sections of society. Research institutes are either coerced or tempted by international funding agencies (sometimes through the government) and are used as laboratories to test out potentially dangerous contraceptives The author relates her experiences in a contraceptive testing unit (CTU) located in the working class area of central Bombay. Inspite of visible side effects, contraceptives ranging from diaphragms to hormonal implants to injectable contraceptives as well as new drugs to induce abortion (MTP) were tested on women in exchange for a modest monetary incentive.

Introduction

Family welfare programmes have to be committed to the emanicipation of women and their being accepted as equal partners in decision making in all spheres of developmental activities. International women's year has created a widespread awareness of the inequalities between men and women. It threw light on the steady decline of women in the labour force, and on the poor participation of women in socio-economic and political activities. The report on the status of women brought out the urgeney of providing facilities for training women and to provide an opportunity for their access to sources including tools and skills so that they could enhance their contribution to their family and to society.

In the field of family planning, it is important to understand the acceptability of a particular contraceptive, reasons for choosing one method over the other and assess what makes women and men continue or discontinue using a method of their choice. It is also important that family planning education is given to both men and women emphasising the inter-relationship between family planning and the status of women, since it is a recognised fact that the status of women directly influences the acceptance of family planning. At the same time the availability of family planning education directly contributes to the status of women by conferring on her a basic human right to choose.

The term 'family planning' was changed to 'family welfare' on this basis and entirely on the premise that when an eligible couple is contacted for family planning, it is the 'couple' who equally share the responsibility of deciding the type of contraceptive they will use, the number of children they will have and when to have them. What is generally happening in reality in the field of family welfare is just the opposite. The ideal contraceptive, acceptable to all people from different strata of society, at the same time being harmless, effective, easy to use, easily available and cheap simply does not exist, at present. What is more disturbing is that research towards attaining this ideal is also not given priority.

Goverment Policies

The initial approach of setting up clinics in different parts of the country and waiting for people to accept fertility regulating methods (FRM) was based on the several so-called (KAP) studies which indicated family planning acceptance. However, the policies of the government changed from time to time due to pressures from foreign government and non-government agencies mostly from the west since these agencies provided money and aid in kind. Later, the approach was changed to family planning extension programmes wherein family planning workers moved in the community and set up depots to distribute condoms. However targets were not fulfilled and once again the approach was changed. Family planning was then integrated with maternal and child welfare programmes and in 1966 post-partum programmes were launched.

These changes of approach were only made on the basis of whether targets were being met or not. For instance at first the number of conventional contraceptive users was considered; the number of IUD users was counted without any consideration of the removal rate after IUD insertion and so on. The same was true with pill users and the extent of bogus sterilisation is only too well known. The KAP studies were mostly useless because the ethos, needs or priorities of the people was not considered.

Added to this in several states the government in its enthusiasm to achieve targets bungled their programmes by coercing people to accept IUDs or sterilisation operations.

The state governments got away with this callous approach to meet targets as far as women were concerned. Women were made to suffer humiliations, indignities and often serious physical side-effects, but the strategy boomeranged on the government when men were forcibly sterilised. A government was toppled! Even then this patriarchial male-dominated society did not care to understand what suffering women had been made to undergo for so many years. If women complained they we e told to bear the side-effects. Now during the past few years, probably to pacify the male ego and to stay in power, the government's stress is once again on women—catch them anywhere, in hospitals after delivery or in abortion and child welfare clinics. Women have to accept any contraceptive that suits the authorities.

Review of literature

Dr. D. N. Kakar has done a study of women using either the pill, IUD, or injectables Kakar, 1984). The study throws light on several factors responsible for a method being continued or discontinued. It is strange why a similar study was not done on the use of condoms. It is because men cannot be bothered to accept the responsibility of using this method ? Though Dr. Kakar's book deals only with women's contraceptives, it sheds light on several important factors which are directly connected with physical problems faced by women due to contraceptive usage and male attitudes to contraception. In several case studies it was pointed out that women discontinued contraceptives because of side-effects such as spotting or intermenstrual bleeding. Several women said that they needed much greater medical attention when these side effects took place. They needed reassurance and understanding from their husbands but were instead treated with a certain coldness Dr. Kakar asks, "how many husbands would be genuinely concerned about providing comfort to their wives without being able to derive sexual gratification ? " It is usually the woman who bears the brunt of physical discomfort and at the same time takes the responsibility of avoiding a pregnancy.

Annual reports of the Indian government and many of the western offices of population have shed light on the amount of foreign aid in the nature of cash and kind. The main contributor to the population control fund and even to the concerned UN body is the USA. The UN has set up a special division on biomedical research and over 100 million had been spent by 1972. The division has clinically tested 45 different drugs and six different devices on 45,000 persons — mainly women of the third world. Among those who have been funding the population activities in the third world countries in cash or kind either through the government or through private agencies are US, UK, Netherlands, Japan, Germany, Canada, Norway and Denmark. In India, WHO and Ford Foundation are the major contributors for research in contraceptives. IPPF, Pathfinders and Population Councils are other important donors. By 1980 over 7,500 subjects, mainly women in Bombay alone were involved in some of the trials in contraceptive testing.

Historical background of a contracptive unit

The family planning unit of the government of India was started in 1954. It had three main objectives - (i) testing of contraceptives for their efficacy, safety and acceptibility; (ii) conducting research in reproduction and fertility control; and (iii) developing newer contraceptives. In 19 6, the FP unit was reorganised as a contraceptive testing unit (CTU). The first clinic was set up in the industrial area of central Bombay. Located in the premises of the mother and children welfare society, the health of mothers and children formed an integral part of its work from its very inception. The social workers' attitude then was to educate women and men of the community in every facet of health. Stress was laid on the overall education of people through organising the community around the clinic. Men, women and children came to the clinic not only for FP methods but for all their socio-economic and other personal problems. Some of the activities started at the clinic were (1) Education of men and women and children through exhibitions, group talks not only on FP but also in health care, antenatal care, post natal care, women's movement and nutrition education. Women and girls were given sex education. (2) The entire community was screened for TB by taking mini x-rays and treated or referred for admission to a hospital. (3) To get the entire community involved in the welfare activities, health day, 'makar-shankranth' day, children's day, women's day and so on were celebrated. (4) Women were encouraged to speak in meetings and debates, their mahila mandal was set up and skits and songs were staged by the women themselves. Competitions in essay writing, painting, were held. Classes in first aid, nutrition and adult education were conducted. (5) Efforts were made to help women continue education and to

secure jobs. (6) Even separate clinics were conducted for ANC and PNC as well as for babies. Sterility being a major problem of the community, sterility clinics were also conducted.

Research activities

Between 1958 and 1962 it was found that older women with large families were the only ones who were attracted to the clinics. As welfare activities increased and as more welfare clinics were set up in different parts of the industrial area in central Bombay a larger number of younger women began to attend the clinics. Foam tablets, spermicide jellies and diaphragms were the conventional contraceptives available at that time. Each woman attending the clinic had to undergo a test for PAP smear' and colposcopy examination to rule out cancer and other gynaecological complaints before contraceptives were given to her. Field trials on foam tablets were conducted. Several foam tablets like Contab and Planitab, were tested. The CTU developed a "24-hour CAP test", to assess the harmlessness of foam tablets and contraceptive jellies Several batches of foam tablets and contraceptive jellies received under a code number were tested by this method which was standardised and recognised internationally. When several jellies were d squalified, there was a hue and cry by the pharmaceutical companies manufacturing these jellies. They pressurised the CTU to abandon the test but the CTU was firm and this rigid stand taken by the unit prevented the release of these sub-standard contraceptive jellies into the Indian market.

By now there were six clinics, three being in industrial areas, two attached to hospitals in Bombay and one in a rural area attached to a PHC In the first year of their existence the community had accepted these clinics truly as family welfare centres. There was an excellent rapport between the research staff and the family members. Those who participated in research trials knew fully well the implications involved. With the arrival of IUDs and later the hormonal pills welfare activities were curtailed. The government started thinking in terms of cost benefit for the entire FP issue. No funds were released for activities which were meant for the welfare and education of the people.

Women were offered money for participating in research. The health of women did not remain the prime consideration of these centres. Several types of IUDs were tried. Now with education, younger women had started attending FP clinics for spacing their children. Eminent gynaecologists based in Bombay made some modifications in these IUDs. Comparative studies with different types and sizes of IUDs were conducted to find out the ones that had minimal side-effects and low failure rates. Copper T and Lippes loop are the outcome of this research and both are now extensively used by women all over the world.

In 1958 and 1959 Dr. Gregory Pincus introduced hormonal contraceptives. The CTU at that time was asked to introduce in their field trials 10 milligram doses of this hormonal contraceptive. This move was resisted by the social workers as they did not want to endanger the health of Indian women. During the sixties and seventies, the government accepted lower doses of hormonal contraceptives for trials in our country. Then began the exploitation of women in contraceptive research.

In the field of research, the funding authorities selected their own research scientists, institutes and private agencies to carry out the research in what they believed was the important area. Policy decisions were also in their hands. What we see today, therefore, is that contraceptive research is being conducted in the area of "someone else's" choice. No research is being done to evolve safer mechanical barrier methods, neither to improve the efficacy of the older methods nor to evolve indigenous safe methods. The mode of administration of hormonal drugs, the dose and the content have varied. But they still remain the dreadful hormones tampering with the woman's body. Listed below are some of the contraceptives, in which research trials were conducted :

Foam tablets : These are used by women just prior to coitus A wet tablet is inserted in the vagina releasing foam which acts as a screen against penetration of sperms which are killed by the chemical action. The women's cervix and vaginal walls could be affected, resulting in irritation, burning and white discharge for many. Efficacy is around 40 per cent.

Diaphragm and jellies - or jelly alone : Spermicidal jelly is applied to the diaphragm and inserted in the vagina within an hour before coitus. The diaphragm acts as a mechanical barrier and the jelly destroys the sperms. Efficacy is good, but this method requires privacy and facility for washing. As above, the cervical canal and the vaginal walls are affected and may cause irritation, burning and white discharge.

Intra-uterine devices (IUD) : There are several types and sizes of these devices— the

important ones being the Lippes' loop, maxguli coil, CuT, CuY, Sonawala and Merchant's devices, and others. All these are inserted within four to seven days of menstrual flow. Being a foreign body inside the uterus, changes in endometrium and release of chemicals occurs resulting in cramps, irregular bleeding, perforations, white discharge and abdominal pains. Some women also complained of headache due to copper devices. (Interestingly when a Lippes loop was inserted headaches disappeared) Unnoticed expulsion is another problem. Perforation with IUDs are well known and the whole of the abdominal cavity could be affected.

Oral pills : Hormal steroids are the basis of each pill. The woman has to swallow one pill a day for each day of the month (with a gap of seven days or otherwise depending on the type of steroids). There have been three-a-month pills too. These gave woman a severe bout of vomitting, giddiness and headaches. Women complained of headaches, nausea, giddiness, dizziness, weight gain, weight loss, rise in blood pressure, continuous bleeding or intermenstrual spotting. Pills have adverse effects on liver function, immune response of the body and cause vitamin B complex deficiency. The oral pills either inhibit ovulation or bring about changes in cervical mucous prevailing pregnancy. Drop out rates are very high.

Injectables : There are two types of injectables, injection Depoprovera and injection NET-EN. Both are known for their adverse effects. These are given to women either once a month, once in three months or once in six months depending on the dose of steroids. Those women who were given 300 mgs (once in six months) after delivery continued to have bleeding severe or moderate to spotting daily for over four to five months. Woman developed prolonged ammenorrhea (absence of menstrual flow). The drop-out rate was very high. Although injection Depoprovera was withdrawn by the government on hearing of the dangerous effects private agencies even today are promoting these through their outlets in India as well as in many other third world countries. Once the injection is given it cannot be withdrawn and the woman has to suffer as long as the effects of the injection persist in her body.

Implants : These are silastic subcutenous implants introduced in women's thighs. The hormones are slowly released into the blood stream and act to prevent conception. Those tried in the CTU clinics were supposed to protect women from pregnancy for eight months but the majority of subjects become pregnant within six months. Side-effects are same as those of hormones. Women had to undergo minor surgery for removal of empty implants which would get embedded in the muscles.

Vaginal rings : These are inserted in the vagina on the fifth day of the menstrual period. It is removed only at the next menstrual period. The vaginal rings are absolutely useless for the majority of women who have no proper toilet facilities. But they were being tried for the prestige of an individual scientist. The vaginal ring caused irritation, burning in the vagina and white discharge. It would also slip off and get lost.

Nasal spray : This drug is dangerous and useless for the majority of our women. It could affect the nasal cavity, thalamus, brain and even the heart as the woman is expceted to spray the drug daily through her nose in definite quantities. Poor malnourished women were cajoled into participating in this trial.

In all the hormonal drug trials women were required to give blood samples at definite intervals to assess the release of hormones in the blood stream. As many as 80 blood samples were collected in some of the trials. At least 10 to 15 blood samples required to be given by each woman participting in each of these trials. Not one lady medical officer has ever raised her voice in protest against this exploitation of poor women. Medical officers are more aware of the hazards a malnourished woman on these trials had to undergo. Yes, women were paid for participating in these trials. But that did not mean that these women had been bought that they could be used as guinea pigs. Are the women doctors so inhuman as not to understand the gravity of the situation ? The health of poor woman is being sacrificed for others — mainly for those funding nations and agencies and in order that the elite may know if a contraceptive might be dangerous or not. Few middle class or upper class women will agree to participate in such trials.

Research in male contraceptives

Mention has to be made of Dr. Padma Vasudevan who has used her knowledge in polymers for evolving a new method of contraception for use by men. Condoms and vasectomy operations are so far the only two methods for men, condoms being the most harmless and the easiest to use.

Dr. Kothari of the KEM Hospital has also conducted some research on developing intravas device (IVCD). But Nothing has been heard of this research for some time now. Nasal sprays were also to have been tried out on men. It is reliably learnt that although men were being approached for trials, not a single man could be enrolled for this trial inspite of being offered VIP treatment. Men apparently could never be bothered with any such trivial contraceptive research trials !

Birth control methods under trial

(a) **Morning after pills :** Trials with 'Morning After' pills are in progress. These are hormonal pills to be swallowed by women the day after coitus. It is too early to say what the side-effects it may have. Women on this trial are also required to give a number of blood samples.

(b) **Pellets :** These are expected to arrive soon for trials on Indian woman. It is not yet known as to which part of the woman's body will be tampered with this time.

(c) **Vaccines :** These are also expected to make their way into India. These vaccines will affect the outer covering of the ovum making it impossible for sperms to penetrate and for fertilisation to occur.

(d) **Prostaglandins for abortion:** When a woman desiring abortion (MTP) goes to a hospital she cannot choose the method by which she will be aborted. Even though there are safe methods which could be improved by research, a drug prostaglandin is being tested. This drug not only gives the women severe camps, abdominal pain, vomitting and diarrhoea but in some cases was the cause of incomplete abortion. Women under the trial programme suffered tremendously. This is another case where advances in science are also being used against women. Amniocentesis was a method developed to help detect an abnormal foetus yet it is now being used extensively for sex determination of the foetus which has in turn led to sex selective abortions.

From the CTO Records

Women of India, mainly from the weaker section of society, are being subjected to all kinds of inhuman treatments at home and even in places where they expect help and service. The following are a few instances recorded in the clinic which illustrate the attitude of husbands towards the wife vis-a-vis her reproductive responsibilities.

Case 1 : During the late 1950s, the early years of the FP programmes, foam tablets as contraceptives were being offered to women. A mother of five children accepted this method after consulting her husband. A packet of 12 tables used to be issued whenever she wanted the stock. Once, a clinic staff removed one tablet from the pack to test the foaming capacity of the tablet and issued 11

(Contd. on page 178)

Campaign Against Long Acting Contraceptives

The government has decided to allow family planning institutions and private gynaecologists and obstetricians to import the injectable contraceptive, Norethisterone enantale (or NET-EN). The ICMR has been conducting studies on the drug for some time now under the WHO multicentric trial programme. The report of the study has not yet been made public and components of the study have not been completed as yet. NET-EN is a synthetic progestogen, similar to Depo Provera which has been the centre of a raging controversy among experts regarding its safety and suitability for women. Several women's groups, people's science groups and people's health groups have come together to protest against the introduction of NET-EN or any other long-acting contraceptive, such as Depo-Provera or contraceptive implants. The demands of the campaign are : Ban NET-EN; Ban all injectable contraceptives; All exports of the ICMR and other studies should be made available to the public; A public inquiry and debate must be instituted before such controversial contraceptives and drugs are introduced into the country. The campaign group's first action was a demonstration at the closed-door experts' meet convened by the Family Planning Association of India ostensibly to help make the decision on whether or not to use NET-EN and/or Depo Provera. The demonstrators distributed pamphlets and stated their demands to the assembly. Sympathetic participants later disclosed that discussions had centred around how best to use the injectables and not whether or not.

For further information on the campaign, please write to Women's Centre, Yasmeen Apartments, Yeshwant Nagar, Santacruz (E), Bombay. So far the following groups have decided to participate in the campaign—Women's Centre, Forum Against Oppression of Women, Medico Friend Circle, Committee for Protection of Democratic Rights, Shramik Mukti Morcha, Kashtakari Sanghatana, Yuva Sangharsh Vahini and others.

— p. p.

Response

Dear Editors : I would like to begin by congratulating Ilina Sen on a principled stand from which many women withdraw feeling that it is not worthwhile raking up a lot of muck. With the result that we continue to be invisible and inaudible. It is important that women emphasise their contribution and insist on recognition if certain deeply ingrained attitudes and assumptions are to be rooted out.

As for Dhruv Mankad's reply - if it had ended with the first paragraph it would have been excusable. Even there - there is the implication that among all the people listed to who contributed to discussion there was no one else who chose to make such a fuss over nothing. It is also astonishing that an editorial perspective is produced without actually reading the articles referred to. I will not raise questions of thoroughness (marxist or male) for fear of being labelled ignorant and presumptuous. Let us just look at the rest of the reply. It is so typical that it merits some examination. A perfectly legitimate protest is called "petty" and "unprincipled", *because the misunderstanding is not sorted out in private*. When such attempts are made in private, our experience is that the jokes which are the normal response deprive it of all seriousness. Secondly the "allegations" are called "wild", the reasoning "immature" and the presumptions "incorrect". This leads to "bickering and quarrels". All this is old hat. Whenever a woman protests about such omissions - the assumption is always that the basis is emotion, hysteria, imbalance and irrationality. The old myths about what the ovaries can do ! Finally after all this heavy-handed, high school masterish chastising of such infantile behaviour Dhruv Mankad actually says he is restraining himself. This is admirable. I for one am really curious to see what his less restrained public behaviour is like. Finally of course the accusation that such reactions are not "responsible". I think it is time we began to examine our own reactions a little more responsibly and critically. It is ironic that in an issue on **Women and Health** such stereotypical reactions should be produced. When I mentioned my own angry reaction to a friend the response was that such debates would not do the magazine much good. On the contrary many of us feel it is far better to discuss these things frankly and openly and expose our own weaknesses, so that we can make a beginning towards recognising and dealing with them. For too long now, the questions raised by women have been subsumed to a larger good, be it the Family or the Cause. Perhaps it is time at least when we are talking about how medicine has rationalised Society's and Men's notions about women we begin to question our own.

May I say how much many of us have looked forward to and enjoyed both the issues of Socialist Health Review ?

H.No. 3-6-170/A
Hyderguda, Hyderabad 500 029

Vasantha Kannabiran

Dhruv Mankad replies

I agree with Vasantha and Ilina that generally a woman's contribution is, consciously, or unconsciously ignored and that whenever she protests against this, it is rejected as hysterical. I also accept that, generally men, including myself, do have conscious or unconscious patriarchal prejudices, having been under their influence for many generations. But in this particular instance, neither in the 'lapse' nor in the response to the 'protest', were these prejudices at work.

I do not call the protest 'petty and unprincipled' because the misunderstanding was not sorted out in private, as Vasantha seems to have assumed. Nor do I call it unprincipled because the protest was not based in principles (which of course, it was). I call it that, because it was not carried out in a principled manner. To me, a principled way of protesting when a lapse occurs on the part of a comrade (I hope Ilina grants me that status), is for the purpose of correcting this error, not just to denounce his/her weakness in strong terms. If that is so, then one does not proceed to accuse the comrade of anything without **first** giving him/her a chance to explain whether it was an error at all, and if it was, under what circumstances it was committed. I think I have tried to point to this in my response. I felt that Ilina should have given me a chance to explain -in PRINT, not in private.

Regarding Vasantha's objections to the terms that I have used in my response viz., 'wild allegations', 'immature reasoning', 'incorrect presumptions', I can only say that I do now realise that these are the very terms about which women are— and ought to be — sensitive about. I did allow my own sensitivity to be blurred by anger.

By all this, I do not claim that I am completely free of patriarchal prejudices. But I am unable to accept any trace of 'stereotypicity' in this particular instance, where in the first place I was not directly responsible for the original lapse.

Finally I do wish to ask Vasantha as to how she came to the conclusion that I have implied that

no one among those with whom the article was discussed has made "such a fuss over nothing". The line in question (of my response) merely states a fact regarding how I came about the content of the article by Binayak and Ilina and that's just what it is supposed to mean.

1877 Joshi Galli, Nipani
Belgaum District Karnataka 56

Dhruv Mankad



Working Editors Reply : We believe that much of this debate would have been avoided if, in the first instance, we had explained how exactly we produce each issue. We do so now especially in reply to Vasantha's query about how an editorial perspective can be produced without actually reading the articles referred to. The editorial perspective for each issue is written and circulated among the editorial collective months in advance (for instance, the editorial perspective for the June 1985 issue was circulated sometime in November, 1984). Articles are 'commissioned' with the perspective in view and in consultation with the author of the perspective. The collective is supposed to send their comments to the author, who incorporates them as s/he sees fit and sends us a final draft for printing. Given the geographical distances, it is not possible for the author of the perspective to read all the articles to be published in the issue, although the contents of each are generally known. The Working Editors in Bombay then add to the perspective, an introduction to the issue containing short synopses of the articles. This is how we worked in producing the first issue as well. Unfortunately, given the fact that we were, at that time trying to accomplish unfamiliar tasks and had to face an array of 'teething troubles' in producing that first issue, we did not check either the copy or the proofs as accurately as we ought to have. Hence the ommission of Ilina's name in the perspective. (with which Dhruv had nothing to do). After having produced four issues, we are now a little more confident and better organised and are careful about checking everything closely. But if there are ever such lapses, please bear with us. Please be assured that we will endeavour to see that prejudicial bias, of any kind, conscious or unconscious, is not projected through SHR.



Dear Friends: Your editorial (SHR I:2) speaks of health organisation as some sort of minimal structure for the poor (working classes), just to keep them from being unproductive to capital. Perhaps your analysis is correct for India (but even there you should think more on the social role of the hospital and the whole gigantic structure of the health institution), but it is not correct and could be misleading for 'capital' as such (which would include industrialised countries as well). I think in our countries (in particular Switzerland) the health institution has been growing to gigantic proportions - - providing a well-defined and reductive sort of 'health', but providing it all the same --- because of the powerful interests that are gravitating around it. It would be the same for a television production capital, an etertainments producing capital, and so on. All these, health included, are capitalistic commodites and lead to profit and accumulation. In the same way as you make money forcing people to go in for colour television (the advertisements are increasingly directed at the working classes) and for personal computers (Spanish and Italian immigrant parents here seriously think of investing 4,000 to buy one for their 14-year old boy), they make money by sending people to ever-growing numbers of hospitals and giving them an increasing number of drugs. Thus the model presented should be more elastic and realistic and try to rouse people about the lack of medical care as well as the profit aspect of this care.

I dislike very much the statement that "women can relate only to other women when it comes to health and their bodies because only women can truly unlerstand one another's problems' (SHR I:2, 66). It is unmotivated, purely sentimental, imported from liberal (or radical) not marxist feminism. Should a worker in the industry were to say that he cannot 'truly understand' the exploitation of a poor peasant, what would you say ? It would be a pity to give emahasis to a thinking that separates what should be united (working class) and unites what should be separated (rich, middle class from poor women).

The paper on amniocentesis is vague and uncertain (at least in its wording which is often ambiguous). Sometimes it seems to say that the reasons were medical (deformations, and so on) but that the social context made it a real danger to female embryos; and sometimes it seems to say that it was introduced to help the massacre of female embryos. A more careful wording (and perhaps thinking) could help the reader find a way to action without being misled.

We found the paper on the Bhutali phenomenon very important and well-written. But we lack the background for understanding what 'adivasi' means for instance, The paper does not help in understanding the relevance of the phenomenon (are there a few villages or some thousands in this situation Does the phenomenon occur a few times a year or several thousand times a year ?) If you would like your journal to be read in the world could you please define terms such as adivasi, lakhs and so on ?

8, Bugnons
1217, Meyrin (Geneva) Switzerland

Dr. Bruno Vitale

Adivasi : aborigines; lakh : one hundred thousand. —W. E.

MOTIVATION FOR FAMILY PLANNING : A Short Critical Review

ilina sen

An important component of the family planning programme of the sixties and the seventies was motivation which meant planned efforts to persuade the public accept the small family norm as well as the particular method of birth control. This concept of motivation became important particularly in the mid-sixties and several strategies were evolved and implemented over the years — mass education about family planning, mass mailing schemes and the use of incentives and disincentives. The article takes a critical look at these strategies, the social political background which gave rise to them, their implementation and effectiveness. The author further examines the assumptions on which the entire motivational strategy was founded and finds them inadequate and full of deeper fallacies.

Among social development plans of the government in the years since independence, thefamily planning programme has perhaps received greater funds and attention than any other single programme. A central element of the family planning programme. as it evolved in the sixties and seventies, was its attention to motivation. By this was meant conscious and planned efforts to influence the public to accept (a) the small family norm, and (b) a particular method of birth control among the many available. In this paper we will attempt to understand this phenomenon of motivation for family planning in greater detail. We shall do this with reference both to actual strategies adopted for motivation in the period before 1977, (a year which marks a watershed of sorts in the history of the Indian family planning programme), and with reference to the theoretical and intellectual basis on which these strategies were founded.

Motivational Strategy — What It Consisted of

The Indian family planning programme was developed in response to what the planners perceived as the 'population problem'. Briefly stated this meant that they saw a high rate of population growth as a major road block on the path to planned development and had visions of the gains of Industrial agricultural growth being swallowed up and reduced to nothing by the growing number of hungry people. Family planning was always an euphemism for a policy of population control and a euphemism based on the faith that the surest way to control the rate of population growth was to get individual families to 'plan' their (small) size, which in any case was in their own interests. In the first decade of independence, the approach to family planning, as to much else, was relatively relaxed. While family planning was designated as a key sector in policy/plan documents, the adoption of specific family planning practices was left for the individual couples to decide upon. The state made available at health care centres, a variety of alternatives in birth control under a cafeteria approach.

The result of the 1961 census showing a decennial growth rate of population that was markedly higher than that of earlier decades (population growth rate was 14.23 percent in the period 1931-41, 13.31 per cent in the period 1941-51 and 21.64 per cent in the period 1951-61) brought on the first signs of panic. The FP bureaucracy felt the need to be radical, and the strategy of community motivation was among its most radical innovations.

The concept of motivation gained importance in the family planning programme in the years following the 1962-1963 report of the Director of Family Planning. This report, known popularly as the Raina Report (1963) seriously questioned the clinic type of family planning services that were then available, and under the broad heading of 'extension approach' laid down the basis for a new strategy, relying on community motivation. It recommended the positioning of an extension educator at each block who would educate and motivate people to become FP acceptors. Hard on the heels of this report, in 1965, came the the IUD breakthrough. All, it seemed that was needed to curb the population growth rate was to (a) motivate the people to have fewer children, and (b) insert IUDs. In 1965 also occurred the first evaluation study of the FP programme by the Programmes Evaluation Organisation (PEO) of the Planning Commission (1965). Following this spate of activity, PF was separated completely from health and established as a separate department. United Nations team that evaluated the programme at the request of the government (UN, 1966) in the

same year spoke optimistically of the education of the public, through opinion leaders, satisfied customers and all available types of mass media. The Mukherjee Committee on IUCD (1965) urged for a mass publicity and communications wing for the new department in addition to the army of staff recommeded by the Raina Report. One of the first results of this decision to go in for mass motivation was thus, a fantastic expansion of the Department of Family Planning. The staffing pattern recommended visualised a Block Extension Educator (BEE) at each of the over 5000 Primary Health Centres, assisted by male FP workers, and female ANMs covering 20,000 and 10,000 population respectively. Full and part-time paid voluntary workers were also employed (numbering over 75 000), in addition to extension staff for the urban clinics. However, in later years, the Kartar Singh Committee was to acknowledge that the actual coverage of extension educators had remained much lower.

The motivational strategy consisted of a massive educational programme supplemented by the field work of the extension educators who directly motivated eligible couples. The strategy for mass education was to flash continuously a few "meaningful and understandable" messages to the public such as "Do ya teen bachhe bas". The country was simultaneously plastered with the red triangle of family planning. This simplistic approach often had no real relevance to the life situation of the public that was being educated; for instance, the slogan "do ya teen bachhe bas"; was cut down to its present size from "do ya teen bache bas; doctor ki salah maniye", when it was discovered that the average Indian villager had no doctor to consult. Films, radio "traditional media," were all used for educational purposes, and although the degree or support to the programme from the mass media unit of the Ministry of Information and Broadcasting, was impressive, the contents of these media products, were unimaginative and often reflected the upper class bias of the producers and of the programme. A lot of the propaganda was centered around a stereotype of two families, the large family is always shown to be poor, unhappy, rural, dark and desi. The other familly, urban, middle-class and westernised is, needless to say, the small and happy one (Banerji, 1971). Songs were written and sung about FP by famous playback singers. FP fortnights, contests and exhibitions were organised in remote small towns and magazines were encouraged to bring out special FP supplements.

In 1969, was started the Mass Mailing Scheme. This mailed suitable informative literature directly to opinion leaders from all walks of life. Even though research found a "good" response to mass mailing, no precise indications regarding the outcome of this expensive exercise are available.

These remained the main prongs of the motivational strategy throughout the sixties. However, from the late 1960's, two parallel but conflicting trends are visible in the programme and its strategy for motivation. The painful realisation around 1968, that the IUCD had failed to deliver the goods, intensified the reliance on sterilisation; if necessary by coercion At the same time some rethinking took place on the whole issue of community motivation. In practice a "hard" and a "soft" line of action are discernable, and these can be followed up separately for convenience.

The 'hard' line :

IUCD insertion figures came down from 909, 726 insertions in 1966-67 to 478,73 in 1968-69. In hindsight, it appears that there could have been many reasons for this perhaps the natural limits of demand had been reached. However, the interpretation put on this trend by the planners, was that there were shortcomings in the motivational efforts. Community motivation being carried out at great expenses, was not having the desired results. This realisation led to the adoption of cruder measures.

Incentive for sterilisation or IUCD insertions have always been spoken of in official family planning circles as "compensation for wages lost." The 1965 Mukherjee Committee report, had spoken of paying compensation to IUCD acceptors (Mukherjee Committee, 1965). While perceiving tne danger of malpractices that may result, this was thought to be less than the danger that would threaten the programme if compensations were not paid. Compensation was tried on a small scale in some states, for instance Madras, in the 1950s, and was started on a national scale in 1964. The motivator's fees that went along with compensation was admissible not only to private citizens but also to Government Servants including FP workers. Rates of compensation were graded as being higher for sterilisations, and lower for IUCD insertions The rates were revised in 1965, and again in 1966. Incentives and target orientation of the programme led, in the late 1960s, to an increasingly greater emphasis on sterilisation with growing tendency to using coercive methods, in addition to widespread malpractices because of the system of the incentives. Any attempt at cutting down on compensation / incentives was however, strongly resented by the medical FP staff,

The idea of using disincentives finds expression in the 1970 document entitled "Master Plan for total Health Care in rural areas" (GOI, 1970) which fortunately, was never implemented. This advocates the professional access of the FP acceptors to all health services The first non-birth incentive scheme was begun by the United Planters Association of South India (Upasi) in selected tea estates in the Nilgiris under the consultancy of Doctor Ridker of USAID. Female tea pickers who had enrolled had a monthly deposit of Rs. 5/- made into their retirement benefit plan by Upasi as long as they did not get pregnant. Specific amounts of the total sum were forefeited in case of pregnancy.

The first mass vasectomy camp was held in the Ernakulam district of Kerala in 1971 (Kumar, 1972). A very large number of sterlisations were performed during the camp duration. The camp and the district collector who had organised it were hailed in FP circles in India and abroad Such camps were held in subsequent months in several other states, and they were all marked by certain special features. Higher than usual rates of compensation were given in cash in addition to gifts in kind during the duration of the camp and the entire administrative machinery of the government of the area was mobilised for publicity and organisation work during the camp. The Kerala camp also happened to coincide with the leanest agriculture season, when special incentives such as a week's extra ration took on a special significance. The demographic quality of those sterilised in the camps was never properly established by independent authorities and in any case the attendance at such camps fell off after the 1972 Gorakhpur incident in which 11 persons died of tetanus, following vasectomy. The camps were discontinued shortly thereafter.

The declaration of the Emergency in June 1975, brought the family planning programme to the forefront of Indian politics The subtle coercion used earlier was now exercised openly to promote sterilisation. Perhaps the turning points was the announcement of Sanjay Gandhi's 4- Point Programme later in 1975, in which FP played an important part. (FP had not been mentioned in the 20-Point Programme.) Sterilisation figures picked up massively—2.5 million operations were performed in 1975-76 as against 1.36 million in 1974-75 and only 0.9 million In 1973-74.

The growing panic at non-performance in a topheavy programme finds its culmination in the National Population Policy of 1976 (Singh, 1976). Though this document did have some developmental content, for instance, stress on female education, only its most coercive aspects were put into effect The policy graded incentives according to the parity of acceptors, and advocated disincentives for government servants not practising FP. Compulsory sterilisation was left to the discretion of individual states as the centre lacked the infrastructure to put such a policy into effect. However, to prod the states into activity in this regard it was stipulated that in all matters of aid allocation to the states, the 1971 population figures would be followed till the year 2001, and that eight percent of the total central aid would be specifically linked to performance in family planning In the prevailing political climate this was interpreted by most of the states as a clear directive, and the states vied with one another to fulfil targets, and to give an impression of success. In many states, departments such as police and education were used to mop up people for sterilistation, and states like MP and Bihar, fulfilled the annual target for sterilisation in less than six months of the year 1976-77. One state, Maharashtra, actually passed the bill on compulsory sterilisation, and this was only prevented from becoming a law by the grace of the President. The political consequences of these events are only too well known.

The soft line :

The "softer" trend in the programmes of motivational efforts, the carrot that accompanied the stick, remained much less effective, often amounting to a lip service only to liberalism and can be traced from the same period as the beginning of the "hard" line. Like the hard line, the 'soft' line was prompted by the realisation of failure.

Doubts began to be cast on efforts to motivate from about 1970. In that year the, second PEO report found the contacts of the FP staff with the local community to be limited and felt that "carrying the messages of FP to the village people required a knowedge . . . of their . . . norms, values, and experiences." (PEO, 1970 , Some of the pioneering writings on population, for instance that by Mamdani, had already pointed out that a large number of children may be an asset in certain class/production situations, and that in these situations it was unrealistic to expect that people would adopt the small family norm merely because a well intentioned department advised them to do so (Mamdani, 1972). It was also perceived that high fertility had a close

relationship with high levels of infant mortality, and in general, with low levels of development. The PEO report briefly acknowledges these trends when it says that "the desire for a small family is more due to economic reasons rather than due to changes in social norms." (PEO, 1970). No concrete approaches in this direction are however, suggested. Similarly, in 1969, the UN evaluation of the programme complained of "gap in our knowledge of the motivational process" (UN 1969). All the soul searching led to a few "changes and departures" in the programme's strategy to motivate the people, and these can now be taken up.

The fallacy of developing FP in isolation from health was realised, and in 1968, maternal and child health services were integrated with immunisations to children and the theme of reduced infant mortality used to establish contact with eligible couples and to motivate them to accept FP. Since however, this was also the period of targets and incentives it is doubtful if this led to any real changes in the approach or not. Possibly it only meant that the already harassed staff were overburdened with finding time for MCH and that these services actually suffered in consequences. The post-partum programme was launched in 1969 in selected hospitals in the country on the basis of the following philosophy: "the months following delivery or abortion... are significant periods of high motivation during which women can be approached concerning future child bearing". Since however, the actual number of hospital deliveries in India form so insignificant a part of the total, the demographic impact of this programme could not have been very high at the best of times. The Country Statement for India at the 1974 World Population Conference in Bucharest with its slogans "Development is the best contraceptive", is also an acknowledgement that more fundamental changes are necessary before the small family norm can be internalised. (World Population Conference, 1974). The approach document to the Fifth Five Year Plan saw FP as part of the integrated package with health and nutrition in the Minimum Needs Programme (Planning Commission. 1977). However, these pious intentions remained unredeemed and from 1975 onwards, in the holocaust of the Emergency, all voices of reason were drowned.

The year 1977 saw a change in government, a change that had taken place at least to some extent as a direct reaction to an unpopular FP programme. The new government redesignated the department as that of Family Welfare and seemed anxious not to repeat the zeal for birth control through sterilisation The Policy statement of the department of June 1977, stressed the voluntary nature of the programme, emphasised the cafeterial approach (allowing the acceptor to choose from a wide variety of methods) and recognised the need of linking FP with other welfare programmes. (GOI, 1977). However, it also expressed concern with the high population growth rate, and fixed birth rate targets of 30 and 25 per thousand to be achieved by the end of the fifth and sixth Plan periods respectively, (as against the then current 34.6. in 1973 as per Sample Registration estimates). It was also stated that the policy of linking eight percent central aid to the states to their FW performance was to continue. In a separate publication " guidelines for media and extensions personne" humility of approach and the pro-mother and pro-child nature of the programme were stressed (FWP, 1977). But the Minister for Health and F.W. made it clear in numerous press statements that incentives for sterilisation would continue. In effect, while some lifting of pressure certainly took place, no real change occured, and certainly no basic assumptions were challenged either by the Janata Party government, or by the Congress government that followed.

The Assumptions Behind The Strategy of Motivation: The 'Relevance' of Theory

We shall now examine the theoretical assumptions on which the entire motivational strategy was founded. Intellectual support for motivational attempts in the family planning programme, were imported mainly from American agricultural extensions and industrial psychology experience. Continued support was provided, once motivation did become the accepted strategy, from KAP (Knowledge, Attitude and Practice) studies in family planning and from 'communications' theory. The periodic evalutions of the programme (twice by the Planning Commission, and twice by the United Nations) also dealt with the theoretical issues.

The classical "diffusion model" that theorised on how and why innovations were adopted was an American agricultural extension creation. It demarcated the following stages in the diffusion of an invention — awareness, interest, evaluation, trial, adoption — and classified the target population into innovators early adopters, non-adopters and so on. Informal sources of information were held to be the most important at the awareness and interest stages, and neighbours and friends were named as

the most important motivators at the evaluation, trial and adoption stages. This theoretical framework was held to have usefulness for "people who are faced with the problem of diffusing new ideas and practices". (Bohlen, 1957).

Of the social and industrial psychology theories that lent support to motivational experiments in India, the following deserve mention :

(a) Maslow's theory of the Heirarchy of Needs that graded human emotional needs as "basic psychological safety, belongingness and love, esteem, and self-fulfilment needs", in that order (Maslow, 1954). Satisfaction of needs at one level motivates the individual to seek satisfaction of needs at the next level, and so on. The most important applications of Maslow's ideas, have been in the labour management and advertisement fields.

(b) McClelland's theory of Need Achievements that stated as a first premise that an individual's success in economic activities was due to his need for achievement or "N-Ach" (McClelland and Winter, 1969). Further premises, developed over several years, were that a society's levels of economic achievement depended on prevalent levels of N. - Ach and that it was possible to teach N-Ach. The last belief had important implications for the Indian FP programme, where much of the motivational strategy was based on the belief that the extension educators could teach the small family norm.

(c) Herzberg's Motivation Hygiene theory which opined that in a work situation, achievement was affected more by the workers' inner urge to succeed than by environmental factors (Herzberg, 1966). The latter had more importance as sources of dissatisfaction.

All these theories had an element of psychological determinism about them. Their view of the individual was that of a 'blank field' that would produce predetermined responses to given stimuli. Developed in the context of early and aggresive capitalist growth, they had a totally atomised concept of a human being who could be egged on through this or that process to have more "N-Ach" or more "inherent urge to succeed". Instead of viewing the individual as a product of a set of social circumstances, they viewed society as the product of differential drive/or N. Ach of its individual components. Only this totally top-sided view of history and society could produce the delusion that 'small family norm' could be taught regardless of its relevance to the life situation of a particular couple.

The other important source of intellectual support came from theories on communications research, developed orginally in the advertising and broadcasting fields, but later studied with particular reference to family planning. Communications research developed an impressive vocabulary of its own. Communication was broken up into its "main elements"- source, message, channel, receiver, bottlenecks, networks and so on. Great importance was attached to identifying particular areas of communication "breakdown" and removing the particular source of a problem. A certain amount of communications research also went into special areas of FP motivation like the whole question of incentives. Incentives were formally classified into positive/ negative, acceptor/diffusor, individual/group, immediate/delayed Rogers, a prolific writer on communications, worte regarding incentives, that while they do result in an increase in the "quantity of FP acceptance", they are likely to affect "quality" adversely. Rogers, (1973). However such cautions were seldom heeded by those on the programme bandwagon, and more encouraging findings of communications research have continued to enrich motivation vocabulary.

Once the programme was properly launched in India, KAP studies conducted by the department itself, as well as by obliging university faculties, became the main prop of the programme against which motivational strategies were planned and evaluated. Rao and Mullick have reviewed over 200 of these studies, and their main theme is that of a KAP gap in India. (Rao and Mullick, 1974). Awareness of FP methods is high, attitudes towards FP are favourable, but the actual practice of family planning by eligible couples is low. The model is obviously based on the classical diffusion theory outlined above. The methodology of the KAP studies has come under increasing attack in recent years. It is to be doubted if a simple linear relationship between K, A, and P exists in as complex an area as this. The measurement of attitudes through surveys or ordinal scales is again of questionable validity. There is, in any case, a vast difference between an attitude, which is a complex socio-psychological entity and an opinion, which is what the questionaires used in the KAP studies elicited.

Some of the inadequacies of the theoretical bases of the motivational strategy are pointed out above. Certain other and deeper fallacies however, have affected the entire programme and we can now turn to these.

The FP programme was prompted in the main by a fear of population size, that is, by (correct or incorrect) considerations of macro population policy. It being unrealistic to expect that family planning decisions should reflect population policy norms rather than individual life experiences, people were quite dishonestly sought to be converted with the message that the small family norm was good for them; proposition that was simply not correct. Considerable evidence was available even in the late sixties that a large family norm may be more suitable in certain situations (for instance in poor, labour intensive agrarian economies and where poorer classes are subject to heavy depletion in children ever born). Some of this sort of understanding did creep into the programme rhetoric from time to time, but made no real difference, as the real moving force behind the programme was never the happiness of individul families

As far as the macro understanding goes, it is not difficult to see through it at all. The argument that over population eats up the gains of developments is not a new one. Not only does it divert attention from more fundamental questions like models of development or distribution of resources; one also senses behind it a fear of people, people of certain nations, certain races and certain classes. It is another manifestation of the old Malthusian bogey that the poor are responsible for their own poverty because of their large numbers.

Birth control, which was all that family planning ever meant in India, can be advocated on many grounds. But certainly it cannot be advocated as a uniform prescription for all, without any regard for human dignity or individual liberty. The events of 1977 amply illustrated that the people would not buy an irrelevant product, however sophisticated the packaging. The tragedy is that no real lessons appear to have been learnt.

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tablets. That night the wife received severe beating from the husband. He suspected that his wife had used one foam tablet with another man.

Case 2 : Having got fed up with her husband forcing her to undergo repeated abortions a woman quietly got an IUD inserted. The husband got suspicious and forced his wife to get it removed. Inspite of removing the device, she was thereafter maltreated and beaten up often. After a few months inspite of her being pregnant she was thrown out of the house in the middle of the night, the reason being that she had not taken her husband's permission to get the IUD inserted.

Case 3 : There was a case of a doctor's wife who had to undergo repeated abortions each time after a 'sex determination test' revealed a female foetus.

Case 4 : Women have to bear the burden of looking after the family and also take the responsibility of contraception. There were several instances when a woman could not be offered any method immediately as she required treatment for some gynaecological complaint. The period of treatment was always short — a month or two in each case. Her husband would be asked to use a condom or refrain himself till she was alright. But in most cases the women would conceive during this period and either continue with an unwanted pregnancy or be forced to undergo an abortion.

Any one who has worked in FP clinics has come across women belonging to various religious groups who demand oral pills to postpone their menstrual periods so that they could participate fully in religious and social functions or even go for an outing. If given a chance, women can decide how they would like to utilise scientific discoveries.

Conclusion

In conclusion, the poor women of the third world countries like India get exploited not only by the government, the research institutes, private individuals in the field of contraceptive research but also by men who care very little about their health and their comforts. Research on birth control measures which could be used by men has not been undertaken with any degree of seriousness.

For instance although the condom is really a harmless and effective method for men, no serious studies have been conducted on its being accepted or rejected by men. Women just leave condoms behind at the hospitals if they are distributed knowing fully well that husbands will not use them. The statistics on condoms are based not on the numbers used but on the total number issued. There is no proper follow-up nor any serious effort to promote this harmless contraceptive. Is it because it is to be used by men ?

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A BIZARRE MEDLEY OF CARROTS

vimal balasubrahmanyan

In the last two years the government in achieving its aims of population control has proposed a number of incentives and disincentives. The author has compiled reports from newspapers in Hyderabad, which tell eloquent story about the government's priorities with regard to the family planning programme.

The following collection of news items over the period 1982-84 presents a picture of the Establishment's preoccupation over incentives and disincentives to achieve population control. They are arranged in a roughly chronological order and a number of the items happen to be from Andhra Pradesh because they were reported in newspapers in Hyderabad where I live. If the readers were to go through newspapers pulished from other cities the picture from other states would be much the same. I've left out a large number of items which tend to be repetitive and which are only too familiar today to the average newspaper reader in this country ie, announcement of a 'camp' with date and venue, total number of operations proposed to be performed and quantum of incentive money offered. I've included a few oddities which are not strictly about incentives but which add further piquancy to the total mosaic. I refrain from making any comment as the collage speaks eloquently for itself.

1982

⚙ The Bihar cabinet sub-committee on family welfare announces 33 cash prizes of Rs. 10 000 each for gram panchayats achieving the "highest target" of sterilisations in the current year. As second and third prizes 66 cash awards would be given to gram panchayats at the rate of Rs. 5,000 and Rs. 3,000 each respectively.

⚙ Extract from a panel discussion on Calcutta Doordarshan's family welfare programme One doctor comments on the uneven performance of different states in curbing the birth rate and another responds : "I suggest, but you may not like the idea, that birth control should be made compulsory by law."

⚙ A new scheme is introduced on an experimental basis by the union ministry of health to enlist the help of private practitioners to achieve tubectomy targets. A private practitioner will be entitled to receive Rs. 50 for each case of tubectomy out of the admissible compensation amount of Rs. 170 to the acceptor, irrespective of whether or not the doctor charges his own fee from the acceptor.

⚙ Industrialists led by J.R.D. Tata announce a contribution of Rs. 10 lakhs to the Family Planning Foundation of India and Rs. 5 lakhs every year hence forth. Mr. Tata tells newsmen that the allocation of Rs. 1,000 crores for FP in the Sixth plan is barely one per cent of the total outlay and is inadequate to check population growth.

⚙ Mr. Sat Pal Mittal, MP and chairman of the Indian Association of Parliamentarians on Population and Development. suggests incentives for FP acceptors like : cash awards, additional bonus, allotment of houses, plots, commercial shops or booths, rebate in income-tax and exemptions from import duty. Other suggestions : three increments for an employee opting for a terminal method after one child and two increments for an employee opting for terminal method after two children However, an employee having a third child should have his increment deferred by six months, and by one year for any subsequent birth.

⚙ Package of disincentives suggested to the health ministry by the Asian Parliamentary Forum for families with more than two children : higher rate of interest on loans, low priority in housing, higher rate of income tax. leave travel expenses only for two children; free medical treatment or reimbursement for only two children, no paid maternity leave for women after two children, public officials who exceed the limit of two children during their tenure of office be made to resign from office.

1983

⚙ Union government announces that green cards will be issued to individual acceptors of terminal methods after two children. Such green card holders will be accorded recognition, priority attention and preferential treatment.

⚙ During 1982-83, East Godavari district performed 27,937 sterilisations against the target of 27,900 thus giving 100.13% achievement for the district.

⚙ At special sterilisation camps organised in three AP towns, State Bank of India provided incentive

money at the rate of Rs. 115 per woman and Rs. 95 per man in addition to gifts for motivators.

⚙ A laparascopic 'mela' took place in Kumbakonam, the city of festivals in June 1983 when as many as 1,225 women were operated upon. The district collector who organised the camp said it was a world record for a single day. So great was the response that the camp was extended for a second day. The highlight is described as the fact that as many as 263 women were below 25.

⚙ Maharashtra having won a Rs. 2.5 crore award for outstanding FP parformance in 1982-83, announces an ambitious target of 687,000 sterilisations in 1983-84, though the target fixed for this state by the centre is only 601,000 sterilisations.

⚙ The Gujarat goverment announces a 20-day foreign trip for district panchayat officers and employees with best performance in family welfare programme. The new scheme is introduced to maintain 'round-the-year' tempo of the programme. District officials with best performance would be sent on study tours to foreign countries at state government expense while the staff of taluka and village panchayats would be sent on a 20-day tour within the country.

⚙ The Kerala government offers incentives of a would tour at government expense to the collector of the district which registers the maximum number of FP operations in a two-month campaign. During the programme incentives to acceptors would be enhanced from Rs. 145 to Rs 170 for women. Men undergoing vasectomy would get Rs. 155 while promoters would receive Rs. 20 for each vasectomy case and Rs. 15 for each tubectomy against the earlier Rs.10. The state health minister expresses the hope that Kerala would win the Rs 2.5 crore cash award given every year by the Union government to that state which performs the maximum number of sterilisations.

⚙ The Delhi Administration announces 'attractive' prizes like wrist watches and cash awards for motivators and acceptors as part of a family welfare programme.

⚙ After the announcement of an enhanced incentive of Rs. 200 for acceptors of sterilisation, there was an unprecedented turn-out at FP camps in Madras --posing problems for the organisers who ran out of funds.

⚙ A health ministry working group on incentives and disincentives suggests that any violation of the small family norm should disqualify a person from standing for an election. Such violation should also disqualify a person from appointment to university senates, directorship of a bank, vice-chancellorship and gybernatorial posts.

⚙ An expert group appointed by the Family planning Foundation of India, chaired by Justice G. D. Khosla, reiterates the disincentives recommended earlier by bodies like the Asian Parliamentary Forum and other working groups (listed in the earlier news items). In addition the Khosla committee suggests low priority for admission into educational institutions for third and subsequent children.

⚙ A DAVP ad issued by the Delhi Administration announces special attractions by lucky draw during a family welfare campaign : **Male sterilisation** : (apart from normal incentives) : Rajdoot motorcycle, TV, Phillips transistor radio, and HMT watches. **Copper T** (apart from normal incentives) : Colour TV, black and white TV, pressure cookers and HMT ladies watches. The ad urges readers to 'avail opportunity' and says : "Do not wait for tomorrow".

1984

⚙ TISCO of Jamshedpur wins the 1983 award from FICCI (Federation of Indian Chambers of Commerce and Industry) for promotion of FP among workers. TISCO's FP programme achieved 7,249 sterilisations during 1982-83.

⚙ Health ministry's advice to state governments on wooing the public to take to sterilisation : issue green cards entitling acceptors to jump the queue for certain facilities and to provide five state lottery tickets of the next draw to acceptors.

⚙ The Andhra Pradesh state government gears itself to achieve the FP target for 1984-85 through a larger number of camps and more incentive schemes. Acceptors' awards to carry prizes of Rs. 400, 200 and 100 through a lottery system in sterilisation camps where over 100 operations are conducted.

⚙ A DAVP ad for a special FP drive in Delhi announces a target of 7,000 sterilisations and 10,000 IUD insertions. To achieve this an 'additional' amount of Rs. 25 and Rs. 5 respectively would be given to the motivator for each case of sterilisation and IUD.

⚙ The Sadhana Samiti in collaboration with the AP government organises a cartoon competition with cash prizes on the theme of family welfare, the

topics being : small family, spacing, sterilisation, MTP, late marriage and maternal and child services.

⚙ The Kerala government announces a lottery exclusively for sterilisation acceptors. Men and women undergoing the operation would receive free lottery tickets and there would be a draw once every three months.

⚙ The Population Advisory Council has before it a proposal by which a public servent will be sacked if a child is born to him besides the two or more existing children after one year from the prescribed date. Other proposals : Security bond of Rs. one lakh maturing after 20 years for those undergoing sterilisation after one or two daughters; a bond of Rs. 60,000 for those undergoing sterilisation after one son and one daughter or after one or two sons; income tax rebate for persons not having more than two children; to promote late marriage employers should pay Rs. 25 per moth to unmarried working girls over 20 years with a matching contribution by the government for three years. The amount will be credited to their account and will be available after three years. To postpone the birth of the first and second child a small monthly allowance may be paid to newly married employees.

⚙ The AP health minister Rammuni Reddy, calls for a hike in incentives for FP acceptors, citing the example of Maharashtra where such a hike enabled that state to bag the cash award of Rs. 2.5 crores. He feels that if the state fixes a target of five lakh sterilisations, the extra expenditure involved would be offset by the bagging of the national cash award.

⚙ The Madhya Pradesh government introduces a 'green card' system for those undergoing sterilisation after two children : each green card holder will get preference in employment, health cover and financial assistance under various schemes; two years relaxation in age for employment and 5% extra marks in interviews; also free medicine and medical care in government hospitals; children need not pay fees in professional courses. In rural areas, landless card holders will get priority in land allotment and house plots, as well as 20 bamboos and ten wooden poles free of cost from the nearest forest depot, licences to open retail shops for fuel and kerosene, priority in allotment of cement, priority in getting loans for milk cattle, grants for setting up wells, pumps and bio-gas plants.

⚙ The *Indian Express* reports a 'massive fraud' and "statistisal acrobatics" in Copper T figures by the Maharashtra government in its efforts to ensure that it again wins the Rs. 2.5 crore annual cash prize awarded by the Union government.

⚙ The Rotary Club announces a two-day 'mini' camp at Nellore in AP with a target of 300 sterilisations. An incentive of Rs. 145 for women and Rs. 125 for men will be given, plus free food to attendants and milk to children accompanying the parents.

⚙ The Punjab health secretary announces a plan to introduce a raffle scheme to attract acceptors of sterilisation. Apart from prize Rs. 1,000 each at monthly draws, a quarterly state-level draw would have a first prize of Rs. one lakh. The scheme would not be a burden on the exchequer as the funds would be drawn from the prize money earlier won by the state from the centre for its FP performance. Approval from the centre is awaited.

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THEORIES OF REPRODUCTIVE BEHAVIOR

A Marxist Critique

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This article is reproduced from the Review of Radical Political Economics, Micro-economic theories that view children as consumer goods or home produced goods which parents either purchase or produce subject to income, price, and taste constraints, are essentially voluntaristic. Sociological theories, on the other hand, stress the socially determined and coercive nature of reproductive behavior. From the standpoint of historical materialism, both theories are open to criticism. It is argued that a scientific analysis of reproduction should transcend the voluntaristic and deterministic alernatives which are the hallmark of bourgeois thought. Instead, using the method of historical materialism, reproduction should be conceptualized in structural, concrete, and historical terms; i.e., as the reflection of the reproductive strategies of classes in the context of a given mode of production This article is reproduced from the Review of Radical Political Economics.

Economics is all about how people make choices. Sociology is all about why they don't have any choices to make. Historical Materialism is all about how and why people make historically specific choices.[2]

Current theories of fertility fall within voluntaristic or deterministic frameworks. Microeconomic theories are voluntaristic: they rest on the assumption that individuals are free to decide whether they want to have children and how many, and that such decisions are based upon a comparsion between the utilities to be expected from children and those expected from allocating resources to other goods.[3] Sociological theories, on the other hand, are deterministic. Sociologically, reproductive behavior[4] is socially determined; it is rooted in the social and economic structure which determine the set of role alternatives, rewards, and punishments confronting individuals at a given time and, consequently, it cannot be adequately investigated if viewed in purely voluntaristic terms.[5]

The shortcomings of microeconomic and sociological theories of reproductive behavior may be traced to their ahistorical approach to the study of social reality and their conceptualization of reproduction in terms of individual behavior and its determinants. Historical materialism[6] transcends the opposition between voluntaristic and deterministic viewpoints and offers a historical and structural approach to the study of reproduction which shifts the focus of theoretical concern to the reproductive strategies of classes and sectors of classes in historically specific contexts.

The epigraph above sums up the content of this essay. The methodological assumptions underlying microeconomic and sociological theories will be outlined and critically examined. Rather than exploring specific applications of these theories, I develop a critique of their theoretical foundations which is based on my interpretation of historical materialism. Several conditions for a scientific Marxist analysis of fertility are delineated.

The Economic Theory of Fertility

The dominant contemporary theoretical efforts at explaining fertility behavior stem from the use of microeconomic theory. Children are viewed as consumer durables[7] or, in the most recent developments, as household produced goods[8]. The main assumptions common to both types of analyses is that households (like firms) behave rationally, maximizing their utility in a context of scarcity: households characterized by given tastes or preferences can choose to consume/produce children and/or commodities. The theory of fertility as consumer behavior also emphasizes income and price constraints: households with given tastes"... are viewed as maximizing utility subject to the constraints of income and prices Thus three factors—income, tastes, and prices—are the basic building blocks of fertility behavior.[9] The theory of fertility as productive behavior adds a fourth relevant constraint: time. The quantity and quality of children and other household goods will be thus a function of the time and resources allocated to their production.

The essence of this approach to fertility behavior lies in the importance given to choice. It is assumed that children and commodities can be described by an indifference curve whose points represent combinations of children and commodities providing the same amount of utility to the household. Households are, consequently, indifferent when confronting the

options offered by an indifference curve and, when facing a set of indifference curves they will choose that which — given their income and price limitations — maximizes their utility.

The Sociological Criticism

Sociologists emphasize social constraints on individual choice. Sociologically, reproductive behavior is socially constrained behavior; it is a key dimension of adult sex roles and, as such, it is supported by a network of social, economic, and psychological rewards and punishments that rule out the desirability of alternatives to the performance of family roles.[10]

Sociologists have convincingly argued that children cannot be appropriately considered as equivalent to consumer goods or home produced goods because the social context of reproduction introduces elements in their process of "consumption/production" that render untenable the main assumptions upon which the economic model rests. Essentially, this means that parents are not free to choose the quality and quantity of children. With respect to quantity, societies vary in their normatively sanctioned desired family size; advanced Western societies seem to have settled upon two as the minimum. Quantity interacts with quality as it is assumed that an only child is likely to have "problems" that could be avoided by having at least two.[11] With respect to quality, parents cannot raise their children at a level separate from their own or that of other siblings; i.e., they are not free to choose between possible combinations of high and low quality children.

Furthermore, parents cannot raise children according to arbitrary rules : there are general socially established minimum standards of child quality as well as specific standards linked to class, socioeconomic status, ethnicity, religion, culture, etc. Finally, parents lack control over the initial quality of their children so that they lack a basis for balancing their potential utility with that of other goods; they cannot reject them if they do not conform to expectations nor can they exchange them or abuse them as they could any other good at their disposal.[12]

The substance of the sociological approach to productive behavior is the following:

> People make their "voluntary" reproductive choices in an institutional context that severely constrains them not to choose non-marriage, not to choose childlessness, not to choose only one child, and even not to limit themselves solely to two children.[13]

Like economists, sociologists begin "post festum" with the results of the process of historical development (e.g., norms, sex roles. desired family size, parental roles, etc.) having acquired the stability of coercive and constraining "social facts." Neither economists nor sociologists deal with the historical specificity of the fetished facts they study and this is why, from the standpoint of historical materialism, their scientific contributions are inherently ideological.

The Marxist Critique

The ideological nature of economic and sociological theories does not stem from deliberate distortions nor from errors that could be eventually corrected. Under capitalist conditions, ideology becomes an inextricable aspect of the social sciences to the extent that those sciences are limited to the partial investigation of social reality thus overlooking aspects of it which while less obvious and apparent are just as important and as real. The material basis of this phenomenon is rooted in the peculiar nature of the social reality treated by capitalist production whose defining feature is the "fetishism of commodities '.[14]

Capitalism, as a mode of production presuppose the universalization of commodity production; i.e. the transformation of labour-power into a commodity and the satisfaction of all needs through market exchanges. It presupposes, therefore, the existence of two classes; the capitalist class which owns the means of production and the working class which owns nothing but its labor-power and must sell it in the market for wages which it must subsequently exchange for goods and services needed for survival. The reality of the market is only one aspect of the totality of capitalist relations. This is the sphere of exchange and circulation of commodities which Marx describes as follows:

> . . . (it) is ... a very Eden of the innate rights of man. There alone rule Freedom, Equality, Property, and Bentham, because both buyer and seller of a commodity, say of labor-power, are constrained only by their own free will . . . Equality because each enters into relation with the other as with a simple owner of commodities, and they exchange equivalent for equivalent. Property, because each disposes only of what is his own. And Bentham, because each looks only to himself. The only force that brings them together and puts them in relation with each other, is the selfishness, the gain, and the private interests of each.[15]

At the level of production there is neither freedom nor equality. Property relations assert themselves as

relations of domination : workers are actually ' free" to choose between starving or working under the sway of capital and the contradiction between their interests and those of the capitalist class results in protracted class struggles whose outcome determine the working conditions found at a given time.

In the capitalist mode of production, the market mystifies the appropriation of unpaid surplus-value by the capitalist class because, at the level of market exchange it appears as if capitalists and workers exchanged equivalent for equivalent; as if the wage were equivalent to the workers' output. Actually, the value of wages is equivalent only to the value of the goods and services needed to reproduce the labor force on a daily and generational basis.[16] The value of the workers' total output, on the other hand, is greater than the value of wages in a proportion determined, ultimately, by the class struggle; the difference is surplus-value, the product of surplus labor time, which capitalists appropriate at the level of production and realize at the level of market exchange.

The market exchange of commodities, through the tyranny of the laws of supply and demand, obscures not only the relations of production between capitalists and workers but also the relations among capitalists themselves which, in their eyes appear as relations among things — their products — which they are unable to control. This is the fetishism of commodities which results in the perception of things and relations among things while class relations and relations of production remain outside the purview of the members of capitalist societies, including social scientists.

The universalization of commodity production ensures the pervasiveness of commodity fetishism which is, from the standpoint of historical materialism, the material basis for determining the boundaries between science and ideology[17] as well as their inextricable combination to the extent that scientific practice remains limited to investigating the level of exchange and circulation of commodities while overlooking the level of production. Marx states the point as follows:

> Man's reflections on the forms of social life and, consequently, also his scientific analysis of those forms, take a course directly opposite to that of their actual historical development. He begins, post festum, with the results of the process of development ready to hand before him. The characters that stamp products as commodities, and whose establishment is a necessary preliminary to the circulation of commodities, have already acquired the stability of natural, self-understood forms of social life, before man seeks to decipher, not their historical character, for in his eyes they are immutable, but their meaning.. The categories of bourgeois economy consists of such like forms. They are forms of thought expressing with social validity the conditions and relations of a definite, historically determined mode of production.[18]

The economic theory of fertility is an object lesson on the meaning of commodity fetishism and, as such, it shares the basic ideological flaws of economic theory in particular and social science in general criticized by Godelier.[19] An application of Godelier's major critical insights to current theorizing about fertility can be summarized in four major points.

1. The microeconomic approach to fertility takes as a point of departure the obvious and visible maximizing behavior of individuals and overlooks the structures that render possible such forms of individual reproductive behavior. It bypasses structures which are "... part of reality but not of visible relationships"[20] and limits the scientific analysis of fertility to its fetishized dimensions. It does not inquire, in other words, into the historically specific conditions under which it becomes possible for scientists to conceptualize fertility behavior in those terms and for people to ask themselves whether they can "afford" a child; instead, it justifies its analysis on the basis of a formal theory of rational choice.[21]

2. It defines fertility behavior in terms of a formal theory of rational action as optimizing behavior in a context of scarcity. Such a formal theory of rationality is a poor basis for a scientific analysis of reproductive behavior because it explains nothing about its content, its origin, and its change. The use of formal rationality is ideological. Whether it is conceived as a universal feature of human nature or as a product of capitalist development, formal rationality functions as an apologia of capitalism. In its light capitalism can be pseudo-deduced from human nature (and consequently endowed with ahistorical immutability) or it can be considered as the source of rationality thus relegating everything else to the realm of tradition, religion, custom, and other substitutes for reasoned analysis.[22]

3. The reliance on formal rationality and individual behavior necessarily leads to neglect of the social nature of the criteria by which individuals

maximize their utility. The subjective utility of children for individuals or households is taken as the basis for explaining how reproductive behavior operates. It is assumed that those utilities, as well as their hierarchical ordering in a map of indifference curves responds solely to individual subjective preferences which can be collected and statistically analyzed, thus providing a pseudoscientific analysis of social needs. It is obvious that such statistical analyses are insufficient to scientifically explain not only the needs and hierarchy of needs dominant in a given social formation at a given time but also, what is more important, the reason why the satisfaction of some needs as well as the form in which such needs are satisfied are deemed more "rational" than others.

4. The theory of choice is based upon a conceptualization of income as an individual attribute. Income is viewed in purely quantitative terms : the amount of income accruing to individuals thus determines, given tastes and market prices, the combination of goods and children that best maximizes their utility. The exclusive concern with the quantity of income reflects the narrow basis of the analysis which remains at the level of market relations and unavoidably overlooks the relevance, for the explanation of fertility behavior, of the relations of production and class relations in which all individuals participate. It obscures the existence of qualitative differences in the sources of individuals' income, differences that stem from their specific location in the mode of production.

The scientific kernel of the economic theory of fertility lies in the identification of the economic constraints that shape fertility behavior under capitalist conditions, and the articulation of those constraints with individuals' tastes into a theory potentially useful for the study of reproductive behavior. The universalization of commodity production, which implies the satisfaction of all needs through the market, does incorporate child-bearing and rearing into market relations both symbolically and practically to the extent that such activities presuppose monetary outlays. Market considerations and relations do invade the household forcing its individual members to behave in an optimizing manner in order to maintain or improve their standard of living and that optimizing behavior necessarily affects reproduction.

On the other hand, the economists' insights on the nature of fertility behavior are scientific for they express "...with social validity the conditions and relations of a definite historically determined mode of production;"[23] but they are also ideological because they do not acknowledge the historical nature of those conditions: i.e., their basis on the capitalist mode of production which not only makes possible the theory and the practice of fertility behavior as consumer/producer behavior but also gives it a historically specific content. Their analysis is limited to the subjective. individual, and formal aspects of fertility behavior; i.e. to its fetishized form.

The Marxist Alternative

These critcisms suggest three specific conditions for a scientific Marxist analysis of reproductive decisions.

1. It should define reproduction in structural rather than individual terms.

Instead of investigating reproductive behavior primarily as the behavior of individuals who, given certain individual attributes (income and tastes) and market prices, choose to consume/produce children, Marxist analysis would investigate the reproductive structures characterizing a given social formation at a given time. As Engels pointed out,

> ... according to the materialistic conception, the determining factor in history is, in the final instance, the production and reproduction of immediate life. This, again, is of a twofold character : on the one side, the production of the means of existence ... on the other side, the production of human beings themselves, the propagation of the species.[24]

Under capitalist conditions, given the twofold nature of production, it becomes necessary to investigate the relationship between the capitalist mode of production and the capitalist mode of reproduction (in the biological and social sense) it presupposes. The capitalist mode of reproduction is the complex structured totality formed by the combination of the material and social elements that enter into the biological and social reproduction of human beings through historically specific (i.e., capitalist) relations of reproduction (relations between the sexes, independent from their will, mediated through their relationship to the material and social conditions of production and reproduction) [25] Consequently, the study of the relationship between capitalist modes of production and reproduction is not equivalent to studying the "interaction" between "family" and the "economy". At the market level, economy and family appear as things in themselves that "interact" with each other in ways that reproduce market relations thus obscuring the relations of production

and the relations of reproduction which underlie market behavior. Under capitalist conditions (as well as in all modes of production based on the private ownership of the means of production) the social relations of reproduction are sexist relations. A structural and historical analysis of the relationship between the capitalist modes of production and reproduction entails, therefore, the investigation of the relationship between capitalist contradictions and sexism both at the levels of public production and at the level of the modes of reproduction that characterize specific classes and sectors of classes. From the standpoint of historical materialism, this investigation is a nececssary preliminary step for the sound study of reproductive patterns for it would disclose the historically specific constraints determining individual reproductive behavior at the market level.

2. It should define reproduction in real, concrete terms, rather than formal terms.[26]

In the *Grundrisse,* in the section on "The Method of Political Economy,"[27] Marx makes an important distinction between three kinds of concepts : imaginary concretes, abstractions of simple definitions, and concrete concepts. The substance of his argument is the following:

It seems correct to begin with the real and the concrete, with the real precondition, thus to begin, in Economics, with e.g , the population, which is the foundation and the subject of the entire social act of production. However, on closer examination this proves false. The population is an abstraction if I leave out, for example, the classes of which it is composed. These classes in turn are an empty phrase if I am not familiar with the elements on which they rest ..... If I were to begin with the population, this would be a chaotic conception (Vorstellung) of the whole, and would then by means of further determination, move analytically towards ever more simple concepts (bhegriff), from the imagined concrete towards ever thinner abstractions until I have arrived at the simplest determinations. From there the journey would have to be retraced until I had finally arrived at population again but this time not as the chaotic conception of the whole, but as a rich totality of many determinations and relations. The concrete is concrete because it is the concentration of many determinations, hence the unity of the diverse.[28]

The economic theory of fertility is a "thin abstraction" a formal analytical construct that distills the essence of the reproductive experience of the vast majority of the people living under capitalist conditions and reifies it into an ahistorical, formal theory of rational choice. The development of a real and concrete concept of reproduction as a "totality of many determinations and relations" involves "retracing the journey" in order to elucidate its historically specific structural foundations. This calls for the investigation of the content given to formally rational individual behavior by the location of individuals and households in the mode of production. In the context of capitalist social formations, the apparently homogeneous population of individuals who, at the market level of analysis appear engaged in formally similar optimizing behavior as consumers/producers of children, disappears at the level of production where it is replaced by a heterogeneous population divided in classes whose rational behavior has qualitatively different contents.

At the level of production, the rational behavior of the capitalist class is dominated by the problem of investments; how to invest to maximize profits. The rationality of the working class, on the other hand, is dominated by the problem of survival : to sell labor-power for the highest possible wages. Survival is ensured by compliance with the goals of the capitalist class and, in that sense, the rationality of the working class is " ... complementary, derivative, and dependent" upon the rationality of the capitalist class.[29]

The relationship between these classes is contradictory and complementary at the same time. The contradiction between capital and labor is obvious : the higher the wages, the lower the profits and vice versa; hence the presence of class struggles as a permanent feature of capitalism. They are complementary in terms of their role in the production process : the ongoing smooth functioning of capitalism depends both on the rational behavior of the capitalist class (e.g , making adequate investment decisions, and the rational behavior of the working class (e.g , adapting its needs and work patterns of the conditions set by the capitalist organization of production). The rational behavior of the capitalist class can be fully effective to the extent it counts with a subordinate, malleable, and controllable labor force It follows that, while the rationality of the capitalist class is unitary (i.e., its class interests and its goals as defined in the production process coincide), the rationality of the working class has contradictory dimensions rooted in the context from which it is defined. From the standpoint of the working class, the rational pursuit of its class interests is in the contradiction with capitalist interests both in the short (e.g., struggle for higher

wages/salaries) and the long run (e.g., struggle to abolish capitalism). On the other hand, from the standpoint of the capitalist class, the working class behaves rationally to the extent it overlooks its own interests and, instead, conforms and adapts its behavior to capitalist demands inside and outside the production process.

At the level of reproduction, it becomes necessary to investigate the ways in which capitalist and working class rationality (i.e., the pursuit of their class interests) affect the reproductive behavior of both classes. To define reproduction in real, concrete terms means, therefore, to inquire into the conditions surrounding the reproduction of classes rather than merely the reproduction of "individuals" or the "human species."

With respect to the reproduction of the rational pursuit of class interest, rational profit-seeking behavior and reproductive patterns are, in principle, functionally related. Reproduction is an integral part of the overall rational behavior of the capitalist class aimed at preserving its economic and political power. Capitalist class families seek to ensure that their children will also be members of the capitalist class and this inevitably affects their family-size decisions.

The analysis of the reproductive patterns of the working class is more complex because the rational pursuit of class interest and the content of formally rational reproductive behavior are relatively independent. Workers cannot directly affect the outcome of the class struggle nor further their class interests through changes in their reproductive patterns. This assessment of the relationship between reproduction and working-class interests rests upon the crucial distinction between *labour-power*, the capacity for physical and intellectual activity, and *laborers* or workers, the owners of labor-power. While the production of labor-power presupposes the existence and reproduction of the workers, the demand for labor and the level of wages are determined not by the existent number of workers, but by economic and political considerations establishing the quantity and quality of labor-power needed at a given time. Under capitalist conditions, whatever their rate of natural increase might be, workers are constantly in excess of the demand for labor-power. Reproductive decisions in other words, do not affect, directly, the size of the reserve army of labor.

Workers do, however, respond to the uncertainties of the labor market by attempting to improve their own individual situation and this has important implications for their reproductive behavior. They may attempt to improve their children's "life chances" in the market by restricting their family size so that each child has larger claim on the family's scarce resources. On the other hand, they may find that a large family is beneficial because it increases the size of a family network which affords protection against the insecurities of the labor market. The specific ways in which different sectors of the working class adapt to changing demands for labor power and the relationship between those adaptive patterns and changes in the status of women in the context of unchanging sexist relations of reproduction are, consequently, of key importance for understanding their reproductive behavior. Rational working-class reproductive behavior is, therefore, another maniestation of the dependent, complementary, derivative rationality that suits the needs of the capitalist class. What appears at the level of the market as the rational optimizing behavior of individuals is a structural effect of the processes through which different sectors of the working class adapt their behavior to the productive and reproductive demands of the capitalist class. The changing content of that formally rational reproductive behavior reflects those changing demands and this topic will be considered in the section that follows.

3. It should analyze "taste" on an objective rather than subjective basis.

It is important to investigate the relationship between the requirements of the capitalist mode of production and the historically specific hierarchy of socially structured alternative and needs confronting different classes at a given time. Marx's analysis of the needs of the working class is pertinent at this point and applicable to all classes :

> .. the number and extent of . . . necessary wants, as also the modes of satisfying them, are themselves the products of historical development, and depend, therefore to a great extent on the degree of civilization of a country, more particularly on the conditions under which, and consequently on the habits and degree of comfort in which, the class of free laborers has been formed. In contradistinction therefore to the case of other commodities, there enters into the determination of the value of labor-power a historical and moral element.[30]

A given number of children can thus be viewed as an integral part of the "historical and moral elements" that enter in the determination of the value of labor-power which includes the means of

subsistence necessary for the reproduction of the labor-power of the workers and their future substitutes : their children.[31] Different kinds of labor-power have different values and are reproduced in contexts requiring a variable number of children. This is a matter that can be empirically determined for different classes and sectors of classes. While that number is subject to a variety of historically specific social constraints (e.g., pronatalist sex roles, norms about family size, tax advantages for families, etc.) and fluctuates in tune to changes in wage levels and market prices, there is at any given time a family size which appears rational within a framework defined by the power of the capitalist class. The extent to which that family size is overtly or tacitly used by social scientists to evaluate the rationality of the fertility behavior characterizing specific countries and/or sectors within a given country is a matter to be empirically established.

In so far as economic theories of fertility overlook the three conditions discussed above, they will retain ideological and apologetic implications for they will conceptualize capitalist reproductive behavior either ahistorically (i.e., as rooted in an utilitarian "human nature") or as the abstract result of "modernization" and "rationalization" processes. The concrete consequences of such approaches are : a) the misunderstanding of reproductive behavior and its determinants; b) the tacit acceptance of capitalist structures, processes, and contradictions which remain outside the scope of scientific concern; and c) the use of the empirical effects of capitalism as a variety of "factors" (e.g., cultural, technological, educational, etc.) that could "explain" variations in reproductive behavior.

Conclusion

As Marx pointed out in this famous passage :

> Men make their own history, but they do not make it just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given, and transmitted from the past.[32]

The deterministic and voluntaristic theoretical assumptions underlying sociology and economics respectively are transcended by historical materialism which, while allowing for the importance of individuals active intervention in social life, it also acknowledges the historical boundaries that give meaning to that intervention and make it possible. From the standpoint of historical materialism it is as abstract and one-sided to argue that individuals are free to choose their family size given income and price limitations as it is to argue that they have no choice whatsoever because their behavior is socially determined. The economists' individualistic/utilitarian assumptions are as misleading as a basis for developing a scientific analysis of reproduction as the sociologists' oversocialized conception of man. Both capture partial or fetishized aspects of social behavior without dealing at the same time with the structures that produce and reproduce those "social facts" on an ever expanding scale. A scientific analysis of fertility cannot be limited to mapping the reified consciousness emergent in the context or universalized commodity production nor to describing the various forms in which coercive "social facts", impinge upon reproductive behavior. A scientific analysis must specify the structural mechanisms that make possible those forms of objectivity and consciousness at a given time. The identification of those mechanisms rests upon a structural concrete, and objective definition of reproduction as the reproduction of classses and relations of production in the context of a historically specific mode of production.

Notes and References

2. J. Duesenberry in *Demographic and Economic change in Developed Countries.* Universities — National Bureau Conferences Series No.11 (Princeton: Princeton University Press 1960), p. 233. I have added the statement about historical materialism.

3. See: Gary S. Becker. "An Economic Analysis of Fertility," in *Demographic and Economic Change in Developed Countries, op. citl.,* p. 209.231; R.A. Easterlin, "Toward a Theory of Fertility," in S. J. Behrman *et. al.*, eds. *Fertility and Family Planning : A World View* (Aun Arbor: U. of Michigan Press, 1969), pp. 127-155: and T.W. Schultz, (ed), *Economics of the Family* (Chicago: University of Chicago Press, 1974).

4. The concept of reproduction can be used to indicate three different levels of analysis : human reproduction, reproduction of the labor force, and social reproduction (Edholm, et, at. 1977). This essay has methodological critique of the economic and sociological approaches to the study of human reproduction. By theories of reproduction it is meant, consequently, theories of fertility and reproductive behavior will be used as interchangable terms. On the other hand, the critique suggests that human reproduction cannot be adequately studied in isolation from social reproduction and the reproduction of the agents of production. Such shifts in levels of analysis will be made explicit in the text and should not pose difficulties for the reader.

5. See, for example, K Davis. "Population Policy Will Current Programs Succeed?" *Science* 158 (1976), PP. 730-739, J. Blake, "Are Babies Consumer Durables?," *Population Studies* 22 (1968). PP. 5-25; Coercive Pronatalism and American Population Policy," in Ellen Peck and J. Senderowitz, eds., Pronatalism: The Myth of Mom and Apple Pie (New York; T. Y, Crowell. 1974). PP, 29-67.

6. Historical materialism is the science of history originally developed by Karl Marx and F. Engels. For a historical analysis of its emergence and an enlightening and systematic discussion of its main concepts see Goran Therborn, *Science, Class and Society* (Atlantic Highlands: Humanities Press, 1976, especially ch. 6, "Working-class Struggles and Theoretical Breaks. The Social and Theoretical Formation of Historical Materialism"). Marxist theory is a more general concept which has been used to indicate a wide range of theoretical standpoint, from idealist to mechanical materialist reading of historical materialism. Throughout the essay and for reasons of style, both terms will be used as if they were synonymous

7. *Op. cit* in footnote 3; also Easterlin, *loc cit*, in footnote 3.

8. Schultz, *op, cit* in footnote 3.

9. Easterlin, *op. cit*, in footnote 3, p. 128.

10. Davis, *op. cit* in footnote 4; Blake, *op, cit*, in footnote 5.

11. For recent research and discussion of the advantages and disadvantages of the one child family in comparison to the family sizes see Sharryl Hawke and David Knox, *One Child by Choice* (Englewood Clifis N.J. Prentice Hall, 1977).

12. Blake (1968), *op cit* in footnote 5, pp. 15-19

13. Blake (1974), *op. cit* in footnote 5, p. 30.

14. Karl Marx. *Capital* Vol. I (New York International Publishers 1907). pp 71-83.

15. *Ibid* p. 176.

16. *Ibid* pp. 170-172.

17. For furthar elaboration of this perspective, see: Therborn, *Science. Class and Societry op. cit.* in footnote 6. pp. 367-8 and Alfred Sohn-Rethel, *Intellectual and Manual Labor* (Atlantic Highlands: Humanities Press, 1978).

18. Marx, *op. cit.* in footnote 14, pp. 75-76.

19. Maurice Godelier, *Rationality and Irrationality in Economics* (New York: Monthly Review Press) 1973, p. 7-49.

20. Maurice Godelier, "Structure and Contradiction in Das Kapital" in Michael Lane ed,. *Introduction to Structuralism* (Boston: Basic Books. 1970). p. 347.

21. Economic rationality is equivalent to formally defined rational behavior (i.e. optimizing behavior or selection of means and ends in terms of marginal utility) and, as such, it can be understood in terms of the formal theory of rational choice which underlies much of the theoretical development of modern social science, including economics. For a detalied analysis of this point see M Godelier, *Rationality and Irrationality in Economics* (New York: Monthly Review Press. 1972) and Anthony Heath. *Rational Choice and Social Exchange*, a Critique of Exchange Theory (New York: Cambridge University Press. 1976).

22. Godelier, *op cit.* in footnote 1 . pp. 15-21.

23. Marx. *op. cit.* foot note 14, p. 76.

24. F. Engels, *The origin of the family, Private Property and the State* (New York : Internatianal Publishers, 1972) p. 71.

25 The methodological argument developed in this essay presupposes knowledge of concepts such as mode of production, social formations, relations of p oduction mode of reproduction, relations of reproductions, and so on. It is true that the theoretical elaboration of historically specific modes of reproduction (biological and social) is still in its early stages and widespread knowledge. let alone agreement, about their adequacy cannot be expected. On the other hand, a detailed presentation of my own understanding of these issues, which I have stated in a recent article (see M. E. Gimenez, " Structuralist Marxism on 'The Woman Question,' " *Science & Society*, Fall, 1978, pp. 301-323), would necessarily break the continuity of the argument. I think, though, that readers familiar with Marxist and feminist theories should have no difficulties in understanding my usage of the concepts mode of reproduction and relation of reproduction.

26. Marx's distinction between imaginary concrete, formal, and concrete or real concepts is one of his most important, albeit cryptically stated methodological insights. The significance of these distinctions is the following : unlike empiricist and idealist epistemologics which seek an understanding of social reality through the discovery of universally valid categories of analysis, Marx's methodology shows that such categories are themselves the product of specific historical relations ; they are valid in all modes of production but on the other hand, they possess their "full validity" only for and within the historic relations that produced them (K. Marx, *Grundrise* London: Penguin, 1973), p, 105.

27. *Ibid.*, pp. 107-8.

28. *Ibid.*, pp., 100-1,

29. Godelier, *op. cit.* in footnote 19. p. 37.

30. Marx. *op. cit.* in footnote 14. p. 171.

31. Marx, *op. cit.* in footnote 14, p. 172.

32. Karl Marx, *The Eighteenth Brumaire of Louis Bonaparte* (New York; International Publishers, 1969), p. 15.

Rural Energy Situation : Consequences for Women's Health - A Comment

Shobha Rao

In recent years there has been a growing awareness among nutritionists and other scientists regarding the problem of undernutrition in our country. Despite the fact that several studies reported in literature come out with diverging opinions and findings, their importance cannot be overlooked since they are likely to influence national nutritional planning. One of the recent studies by Batliwala (SHR I, 2) is of interest in this context and needs to be critically studied.

The scrutiny is of importance for two reasons. First, while many studies deal with the problem of undernutrition in general, very few have discussed its nature in the case of women. Secondly, the study claims to offer an alternative facet of improving women's nutrition and health which is rather interesting and might have consequences for policy implications.

The main conclusions of the study are given as (i) women contribute the greatest share in human energy expended, but in comparison to this energy output, women get a lower share of food intake and face a nutritional deficit. (ii) In addition to nutritional deficit, women face health hazards due to the village energy system (iii) Redusing energy expenditure..... energy saving-is recommended as an additional facet of improving women's nutrition and health.

Let us start with the central issue i.e. women contribute the greatest in human energy expended. The relevant figures are given in Table 2 (1:2,). tI should be noted that not only the difference in energy expenditure of men and women is negligible, but the way these estimates are obtained is also questionable. For example, one of the assumptions is that the ratio of caloric costs for any activity for female to that for male is equal to the ratio of female BMR. The author appears to be unaware of the fact that in recent years the notion that the BMR in an individual is constant, has been questioned and evidence is coming up to show that it is not. Therefore, although we doubt very much that this could be so, it would have been better if the author had cited appropriate references. The reason why the author suspects this negligible difference is due to the fact that men on average work for 4 hours a day, whereas women work for 6 hours. However, it cannot be neglected that men are engaged in heavy activities whereas most of the activities of women are of a sedentary and moderate nature. Considering that the caloric costs of moderate and heavy activities differ significantly, the observation that the difference in energy expenditure is marginal could be well so. In short, the methodology of obtaining the estimate of energy expenditure appears to have a weak basis.

Coming to her estimate of the intake of men, women and children, the situation is even worse. She uses crude ratios such as 2:1.5:1 (balls) based on responses to oral questions put to the local women and applies this ratio to the overall cereal consumption of the family for the day thus obtainingi ntake estimates. The author gives no information whatsoever on whether this ratio is based on the responses of a sufficiently large sample of women, nor on how the figure 4.24 kg of overall cereal consumption has been arrived at. The conclusion therefore that a man has an intake surplus of 800 calories whereas a woman has an intake deficit of about 100 calcries is unacceptable in the light of the weakness of her methodology.

Further, she goes on to claim that this 'calorie gap' suffered by women is not of equal concern to all and brings in Sukhatme's theory. Her criticism of Sukhatme's theory only reveals that she is missing the essence of this theory. It is necessary to understand that it is the nutrition science itself that offers body weight and level of activity as indicators while defining calorie requirements. Thus, according to the current concepts, individuals similar in age-sex, body size, doing similar activities are assumed to have the same energy needs. Alternatively, if an indiviqual maintains his body weight and activity over time, his requirement is assumed to be constant.

Sukhatme is bringing out the fact that these assumptions are not supported by experimental data. For, if the above assumptions were true, we would not witness the large variation in intake (coefficient of variation of the order of 16 percent) of individuals similar in age-sex weight and doing similar activities (Widdowson 1962, Harris 1962). Nor would we observe the coefficient of variation in weekly mean

intakes of the same individual to be as high as 13 to 15 percent. Sukhatme thus brings out the fact that the current definition fails to explain the large variation observed in intake or balance.

His theory on the other hand explains the nature of this variation with the help of the concept of intra-individual variation. Just as the blood glucose concentration in a healthy active man in fasting condition varies between 60 mg and 120 mg per 100 ml of blood, there is evidence to show that a man can do a given amount of work on a range of intakes. Thus, intra-individual variation is the fundamental source of variation and therefore it is hard to obtain a one-to-one relationship in daily intakes and expenditure. Finally, it is worth mentioning here that intra-individual variation is related to short-term fluctuations such as observed over few weeks or months, but cannot be taken when considering long term periods (of several years or a life long period) as the author seems to consider. It would in fact be wrong to visualise this hypothesis in such a way and comment on long term adaptations and so on. Nutrition science has yet to go a long way to study the phenomenon of 'adaptation' which the author is speaking about.

The author seems to assume that undernutrition is the sole cause for the several facts mentioned such as more female deaths, high maternal mortality rates, low birth weight and so on. It is well known that a number of social and environmental factors also contribute to this and it is difficult to show a causal relationship between undernutrition and these facts. Just the same way, it has been shown that although low birth weight could be one of the factors responsible for high infant mortalityr ate, most infant deaths in developing countries are due to past neonatal causes and diarrhoea is observed to be one of the main causes, thus indicating the influence of poor environment.

Although her concern about women's health is well understood, isn't it a fact that the issue has its roots in the law status of women, both social and economical in our society. There is therefore, no dispute that every effort should be made for proper implementation of current health services to ensure that they reach needy women.

To summarise, the lack of sound methodology in obtaining estimates of intake and expenditure seriously questions the finding that women face greater nutritional deficit. Therefore, her suggestion for reducing energy expenditure or for energy saving are not appealing. Further, there is no reason to consider that physiological responses of the body for increased intake or reduced expenditure could be same. Today in developed countries individuals find ways to spend there energy by means of jogging, bicycling etc. in order to keep their muscles active and to maintain proper body stature. Therefore it is necessary to give a thought for the possible consequences, good or bad, of energy saving.

Finally, it is clear that energy saving in practice will not be achieved without enough technological and economic resources. This is not to deny the role of technology, but at the same time it is important that changes introduced for saving women's energy should fit in the culture of our rural life. For example, replacing traditional chulas by gas stoves to reduce health hazards may not be a wise step. But instead it is necessary to convince villagers that there should be a proper outlet for the smoke to go out and see that every house in fact, has one such outlet. It is our experience that in the past few years, bore-wells have been installed in almost every village but the fact is that women still go for fetching water to the old village well, without realising that that this water is unsafe for drinking. It is therefore a basic minimum education for the women for their own wellbeing that should precede such technological and other advances.

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Witch Hunting Among The Bhil Meenas of Rajasthan

Narendra Gupta

The problem of witch hunting as reported by Kashtakari Sanghtana SHRI (1:2, 1984) is prevalent among all adivasi and primitive societies in varying forms. The problem as envisaged in the report has no ready solution because the tradition is very old and deeply rooted within the culture. The practice of witchcraft evolved as a system of beliefs to face the unknown supernatural world and its adverse

manifestations in day-to-day life. To find any resolution of this problem would require a greater insight into adivasi culture, environment, social and religious institutions.

Southern Rajasthan where we work, is mostly inhabitated by Bhil Meena adivasis. Here the incidence of witch-hunting has decreased considerably in the past few decades. It is now present in a different and milder form. Among the Bhil Meenas, witchcraft forms a part of magical rites and can be performed by magicians who are called as "Zangars" in the local dialect. These zangars are not medicinemen and they are approached when all other measures of resolving the crisis have failed. The first agency in any sort of crisis is the bhopa who is a faith-healer, an adivasi with powers to call supernatural spirits into his body. At a sanctified place he goes into a trance when the spirit enters him. The problem is explained to this spirit and it suggests remedies. If all such remedies fail then the possibility of a witch is considered. A magician is approached to ascertain the involvement of a witch. (There are very few magicians in this area.) These magicians by performing magical rites through the night will confirm the presence of a witch and provide either the description of witch or her exact name or address. Through another set of magical rites the magician will invoke the witch and ask about her presence in in the family facing crisis and what she requires to leave the diseased person or the family. She is never however offered any of the things she wants but tortured and forced to leave by magical charms. In some cases the woman who is believed to be a witch is brought to the magician and put in his control. There have been some instances when a woman identified as a witch was killed but not in an open trial. These women were killed secretly by the family members facing crisis. Generally witches are considered to be females in this area however there are also male witches. They are thought to be stronger than women witches.

Who is this witch? Why did such a concept and practice evolve? Some of the explorations and causes mentioned in the report in SHR seem logical but only in the present-day context. However, we need more definitive knowledge. Adivasis are a brave and courageous people. At the same time they have a carefree attitude towards life and believe in enjoying it. Therefore, poverty has a very marginal effect on them. It is only recently that they have turned agrarian and have started taking up jobs out side their homeland. The concept of storing things for the future is also very new to them. Hence any sort of condition leading to material hardship, lowered resistance to disease cannot be a sufficient reason for the continuing practice of witch hunting, which has become institutionalised in this society for centuries. Similarly, inaccessibility to health care facilities, disruption of communications and shortage of money are very new occurrencs which are not even well perceived by adivasis and cannot be the cause of frustation leading to witch hunting,

To the Bhil Meena adivasis, death is an integral part of life and is not seen as something ghastly. Death even in action (hunting, war, orb of snake bite) does not inspire awe or horror. It is also believed among them that the soul, the divine force in the living body, after death goes to the land of dead to rest with ancestors who are believed to have influenced their every day affairs, when alive. According to them this soul may also take the form of an evil spirit and return to this earth to finish its unsatisfied desires. This evil spirit on earth makes its home in the body of a human being, (mostly woman) as it is the woman who can beget. Such a woman will change into a witch. There are lots of descriptions of witches which vary from place to place.

One more possible reason for the practice of witch hunting among adivasis could be their cultural configuration which is close to nature and the core of their own cult practices. Although primitive, it is representative of their beliefs and religion. During the course of their day-to-day life they have to encounter the wildness of this configuration. Wildness provokes wildness, and it is this animistic behaviour of adivasis which finds its expression in the form of witch hunting. The reason for diminished incidence of witch hunting in this area can also be attributed to the influence on adivasis of Hindu religion. Adivasis in this area have made many adjustments to fit in with this new influence and it is always considered superior. This constant interaction with new patterns of culture has resulted in a diversity of cultural practices and traits which are less animistic.

A practice like this is barbarous and should stop, but the people who practice it, do it within a set of concepts and unless these concepts are changed, it is very difficult for people to get away from it.

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"First, we have the working class, which because of the principle of population is always too numerous relatively to the means of subsistence alloted to it — ie. over-population due to underproduction. Second, we have the capitalist class, which as a consequence of the same principle of population is always able to sell back their own product to the workers at such a price that they get back only just as much of it as is necessary to keep body and soul together. And third, we have an immense section of society which consists of parasites and self-indulgent drones, in part masters and in part servants, who appropriate gratuitously a considerable quantity of wealth — partly under the name of rent and partly under political titles — from the capitalist class, paying for the commodities produced by the latter above their value with the money they have taken from the capitalists themselves. The capitalist class is spurred on in production by the impulse towards accumulation; the unproductive classes, from the economic point of view, represent merely the impulse towards consumption and prodigality. And this is the only means of escape from overproduction, which exists alongside overpopulation relatively to production. Over-consumption by the classes standing outside production is (recommended) as the best remedy for both overproduction and overpopulation. The disproportion between the working population and production is neutralized by means of the consumption of a portion of the product by those who do not produce, by idlers. The disproportion represented by the overproduction of the capitalists (is cancelled out) by the overconsumption of the extravagant rich."

—Karl Marx

(From Marxs's *'Theories of Surplus Value'*, Vol. 3
Reproduced from Meek, R. L. (Ed) *''Marx and Engels on the Population Bomb*
Ramparts Press, Inc , California).

Vol. II No. 1
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HEALTH AND MEDICINE UNDER IMPERIALISM

Imperialism is the highest stage of capitalism wherein monopoly capital dominates the life of society. Monopoly capital leads on the one hand, to a tremendous development of the productive capacity of human society, the spread of relations of wage-labour and capital throughout the world; but on the other hand, the private monopoly over these productive forces leads to its underutilisation its distorted development and the domination of one country or a group of countries over others either in the form of colonialism or otherwise. What are the *specific* effects of this phase of capitalism on health (the determinants, dynamics and the status of health) and Medicine (medical knowledge and medical profession) ? In general, the contradictions of capitalism between development of productive forces in society and the specific capitalist relations of production get accentuated in the period of imperialism. Thus the tremendous development of productive forces in the period of imperialism makes it more and more unnecessary for ill-health to continue to prevail. Moreover this development makes it more and more possible to improve health in a positive sense. But at the same time, capitalist relations of production in the imperialist phase do not allow full utilisation of this possibility. This can be seen from only a limited improvement in the provision of food, water, sanitation, safe working environment, medical care, to all the people in the world. Further, monopoly capitalism affects the development of productive forces in such a manner that they instead, foster ill-health by creating malnourishment all over the world (overnourishment in the imperialist countries, and undernourishment in the peripheral countries); pollution-creating and accident-prone working environment, disease creating medical interventions and so on.

This contradiction is also seen in medicine. On the one hand there has been a fantastic development in the medical knowledge leading to increased possibility of preventing and treating diseases. But on the other hand, the character of medical service as commodity (though often paid through social insurance) continues to limit its usefulness and this increasingly costly commodity is not adequately available to vast sections of the population who cannot afford to pay for it. Even the development of medical knowledge and of the profession itself has been vitiated by the narrow interests of those in charge of this knowledge and the services. Thus for example there is comparatively less research on the health problems of the people in the peripheral countries; inspite of the rise of preventive medicine, clinical medicine continues to dominate the scene; sexism, racism, expertism continues to affect the character of medicine. Medicine has also played an increasingly important role as one of the ideological supports of the ruling class (Ehrenreich, 1978). For example, medicine gives "scientific" credibility to the ideas of the ruling class that diseases are caused by germs, ignorance, bad habits and "ofcourse" poverty for which people themselves are to be blamed, and that ill-health can be got rid of if people become wiser, learn to live clean, give up bad habits and listen to the advice of the medical experts. Medical health care programmes have been used to diffuse class tensions.

Imperialism has developed through two distinct phases, from 1880's to 1945 is the colonial phase, wherein imperialist domination required direct political rule. The post-war period has seen the development of a new phase in imperialism with a distinct change in the structure of imperialist centres (rise of multinationals, of state intervention and so on) in the international division of labour and rise of politically independent bourgeois regimes in peripheral countries. We have to analyse health and medicine in both these phases.

Health in the Imperialist Countries

After 1870, in countries like UK, the incidence of infectious diseases and of diseases of malnourishment started a secular decline, thanks to the rising living standards and some public sanitary measures. But the mortality and morbidity declined much more slowly among the working classes. A substantial section of the population was still undernourished. Thus as late as 1930, a study in UK showed that out of six categories of population according to their income, only the two most prosperous had adequate diet (Doyal and Pennel, 1979). Even in 1970s and 80s some undernourishment continued in some working class sections of the population. But gradually food consumption had increased and this along with better sanitation, housing, and

other facilities decreased the morbidity and mortality due to infectious diseases. It needs to be noted that the impact of cheap grains and other food products from colonial countries enabled monopoly capital to offer concessions to the working class through an improved food basket, without much rise in the money wages.

The secular decline in undernourishment in the imperialist countries was, however, replaced by a new form of malnourishment, overconsumption, thanks to the rise of monopoly agri-business especially after the second world war. Production of concentrated foods stuffed with calories by reducing its fibre content is the way of increase its value per unit of weight and the surplus value (profit) contained in it. This low fibre, high caloric-density food led to the problem of constipation and a host of intestinal diseases related to it on the one hand, and the diseases due to overweight, cardio-vascular diseases on the other (Doyal & Pennel 1979).

Monopoly capital gave rise to a whole variety of new industrial products and processes. The technology to control pollution has, however, developed at a much slower rate since capitalists are primarily interested in profits and not in the health of the people. As a result, the workers and people in the neighbourhood were exposed to a new variety of pollutants, many of them being carcinogens. A new set of "industrial diseases" have sprung up.

Monopoly capitalism breeds consumerism. Even those products which are harmful to health are pushed onto the consumers through high pressure salesmanship which is characteristic of monopoly capitalism. For example, cigarettes, individual transport instead of efficient public transport, use of drugs and medical equipment when not indicated, and so on.

All the above tendencies are seen in a more sharpened form in the *post-war period*. The hazards of nuclear power reactors is an additional phenomenon. Increased alienation, psychological stress and strain has resulted in a higher incidence of psychiatric disorders as indicated by the fact that in England, 50 percent of the National Health Scheme expenditure is now used to provide psychiatric care of one kind or another (Doyal & Pennell, 1979). Massive state intervention in the economy is the specific feature of post-war capitalism. This has however not basically changed the process of social production of ill-health; state intervention has not been able to control the process of overnourishment, pollution, accidents and psychological stresses, generated by the incessant drive of the capitalist class for capital accumulation.

Two imperialist world wars figure as two dark patches in this otherwise not so happy scenario. Millions and millions perished, crores got injured, maimed, uprooted. Undernourishment, infections raised their heads once again. These and other effects turned the clock by decades.

Health in Peripheral Countries

What has been the effect of imperialism on the health of the people in the peripheral countries? The deleterious effect has been manifold. Wars of colonial conquest and inter-imperialist rivalry left many natives dead, injured and maimed. The ravages of war, the decline in availability of food, social disruption also took their toll in health.

The impact of the policies of the colonial masters have been studied by some researchers. Study of Africa offers a typical example (Turshen 1977, Doyal with Pennel 1979). Alongwith the conquest by western imperialists came a host of infectious diseases carried by the invaders from the pool of infection in Western Europe (Doyal with Pennel, 1979). The imposition of high taxes in cash and commercialisation of agriculture led to widespread poverty and reduction of availability of food; the migrant labour system, plantations, and the filthy, newly-industrialised towns led to epidemics, premature deaths, venereal diseases and alcoholism. The extreme degree of exploitation with scant regard to the health of the workers in the cities gave rise to a high incidence of industrial diseases (Elling 1981) and high incidence of infectious diseases. In the rural areas, indiscriminate tampering with the local environment led to epidemics of sleeping sickness, malaria and other diseases.

In the *post colonial period*, inspite of the faster tempo of the development of productive forces in the newly politically independent states the living-conditions of the labouring people did not improve, except for a section of the working class in the cities. Eradication of plague, small-pox; decline in cholera, malaria (in other words, those problems which are primarily amenable to technological solutions) have increased the average longevity. But there are medico-social and new health problems begging solutions. Those polluting industries which cannot now be tolerated in the West due to increased popular resistance to pollution have been exported

to the peripheral countries. Newly created irrigation-systems have led to malaria, filaria and Japanese encephalitis in certain parts of India (PPST Bulletin, 1984). Unplanned use of pesticides in the strategy of green revolution has increased the problem of mosquito resistance to D.D.T. Dams have increased the incidence of bilharziasis in places like Egypt. A series of wars amongst peripheral countries have benefited the imperialists at the expense of the health of the people.

Concentration of world food production in the imperialist countries after the second world war and the dependence of peripheral countries on food imports from abroad has converted the food situation into a political issue. The sudden withdrawal of the US food "aid" component in the seventies led to wide spread hunger, death, malnourishment in Sahel, Bangladesh and elsewhere. The health of the people in those countries which are now dependent on food imports is now at the mercy of the imperialists.

Medicine Under Imperialism

What have been the characteristics of Medicine in the period of imperialism? It is only after the 1870s that clinical medicine acquired some solid scientific formulation. All the branches of scientific clinical medicine have grown very rapidly during the last 100 years. But at the same time, medicine became more and more synonymous with clinical medicine since the character of medical services remained primarily in the form of sale and purchase between individual doctor and the patient. Though the sanitary and social reforms were almost solely responsible for the improvement in the health status of the population, clinical medicine and the "germ theory of disease" usurped the pride of place in the ideology of medicine since the vested interests of the clinicians demanded this. With the establishment of scientific clinical medicine a final, decisive onslaught on the traditional medical system as well as homoeopathic system was made through the famous Flexner report in the US which argued for allowing only "scientific medicine" (meaning clinical medicine with all the limitations imposed by the commercial professionalism of male doctors) to continue. Scientific clinical medicine, however, arrived too late on the European scene since most of the infectious diseases had already declined substantially and medicine had hardly anything to offer on the new health problems. The post-war period saw a new explosion of scientific knowledge. In the absence of a proper social perspective, and a conducive structure of medical profession, this new knowledge led the ideology of superspecialisation and expertism.

The discipline of "public health" in the mid-nineteenth centrury grew into a modern science of Preventive and Social Medicine (PSM) and still further into Community Medicine in the twentieth century. But firstly this all important approach has been relegated to secondary importance by the medical-industrial complex. Secondly, the established discipline of PSM has neglected or rejected the Marxian approach, is informed by bourgeois sociology and hence it has hardly any correct understanding of the relation between health and the process of capitalist development, of the changing balance of class forces. Its scientific insights are marred by its bourgeois paradigm/framework and hence cannot challenge bourgeois social order. Nay more — it tends to create illusions that ill-health can be eliminated through technical interventions applied on a social scale. Through concepts like "tropical diseases", "diseases of industrialisation", PSM *naturalises* the cause of diseases which are primarily of *social* origin. It has thus a kind of fetishistic understanding of the diseases and hence has become a part of bourgeois ideology.

The specific effect of monopoly capitalism has been the rise of monopoly medical industrial complex. The monopoly drug corporations, medical equipment corporations and health insurance corporations have joined hands together (with the doctors acting as accomplices) to exploit the people, to breed consumerism and help keep the labour-force docile and productive. Some medical insurance companies like Metropolitan Life, Providential have grown larger than General Motors and Standard Oil. Unncessary medical interventions at each stage of life; ("from womb to tomb") this medicalisation of life (Illich 1976) is a specific feature of this stage of capitalism.

Special mention needs to be made of the drug companies. The explosion of antibiotics and other "wonder" drugs after the second imperialist world war is hailed as one of the greatest achievements of n odern medicine. But these drugs which can contribute a great deal to relieve pain and sufferings, are not available to the poor. Secondly, an illusion is being created that medicine can solve the healthy problems of society with the help of these "wonder" drugs. The potential created by modern sciences like chemistry and pharmacology is being used to exploit people and create illusions. There is plenty of literature available on this issue.

Thus the heightened capacity of medicine in the period of monopoly capitalism has not only been limitedly used, but the capacity itself has been affected by monopoly capital.

Medicine and Imperialist Domination

What has been the role of Medicine in the imperialist domination over the peripheral countries? In the colonial period, medicine helped the conquest of colonies. Some of the infectious diseases like yellow fever and malaria, took a heavy toll of the imperialist army and hence made it impossible for the army to win territories. Medicine solved this problem by controlling these diseases (Brown 1978, Doyal and Pennell 1979). But, those diseases which exclusively affected the natives were not controlled in this period. Secondly, effective curative services offered by missionary dispensaries created a good impression on the natives; and distracted their attention from the ill effects of colonialism. In the words of the then president of the Rockfeller Foundation, "Dispensaries and Physicians have of late been peacefully penetrating areas of Phillipines Islands and demonstrating the fact that for the purpose of placating primitive and suspicious peoples, medicine has advantages over machine guns." (Brown 1978).

Later, the imperialists initiated health programmes for the natives to improve their health and thereby their productivity. Increased productivity meant increased profits for imperialists. For example, the Rockfeller Foundation programme to control hookworm infestation in Latin America (Brown 1978). Such health-programmes also offered them opportunities to export drugs and equipment. Problems like tuberculosis, leprosy, venereal diseases cannot however, be eradicated by such techniques of social engineering because they are much more deeply rooted in the social structure of peripheral capitalist countries. Colonialism has also led to the suppression of indigenous systems of medicine.

In the post-colonial period, it is well known as to how the imperialist domination in the field of medicine over politically independent countries continues in an indirect form through the multinational drug companies, through population control programmes and other "health programmes". The role of western dominated medical education is also important. Western dominated medical education in peripheral countries produces doctors suited to work in imperialist countries. This enables imperialist countries to import medical graduates from peripheral countries and save money which would have otherwise been spent on training doctors in their own country. This "brain drain" is also a financial drain since peripheral countries spend so much on training these doctors here. Moreover, the illusion that health problems of your society can be solved through medical interventions carried with the help of 'superior and benevolent" west, the ideology of medical expertism percolates through this type of medical education.

The period of rapid growth of peripheral capitalist societies after political independence came to an end in the late sixties. As a part of its response to this crisis, the ruling class is changing its strategy of medical care. The cost of medical care is sought to be reduced through the scheme of village health workers. New innovations in the management of health problems are being used to create illusions under the slogan of "Health for all by 2000 AD". The talk about "indigenous" system being made more suitable than "Western medicine" needs to be understood in this context. There's hardly an adequate attempt to really find out and develop the useful, rational aspect of indigenous systems of medicine. The continued neglect of these systems shows that the hollow praise bestowed on it is only a part of the new strategy of dumping responsibility onto the people for their health.

A struggle to create a healthier society and an appropriate system of medical care cannot be separated from the struggle against imperialism. In this struggle, the aim cannot only be taking over the existing productive forces, the existing medical system and using it in the people's interests. How can people in a socialist society be healthy if they consume the same amount and type of food as is being done in the US today or get their electricity from nuclear reactors? Likewise imperialism has also vitiated the science of Medicine. How exactly and to what extent this has happened is a matter of further study. A word of caution is in order here. Let us not fall into the opposite pitfall of rejecting the relevant scientific advances made by medicine in capitalism. One cannot talk in terms of modern medicine as such and reject it. Rather its a question of grasping the rational kernel of existing medicine and developing it further Otherwise, we would throw away the baby with the bath water.

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In This Issue

Radhika Ramasubban examines the colonial health policy in India and traces its legacy to the present public health system. Meera Chatterjee highlights the wide ranging implications of a new scheme formulated by the American Association of Physicians of Indian Origin in collaboration with the IMA to transfer high technology in medicine to India. Warren Salmon's reprinted article deals with the increasing interest and involvement of large US corporations in health issues in America and the emerging class stand which will eventually restructure the health sector under monopoly control. The article on racism and health in the US, a revealing glimpse at health care in a country which spends one billion a day on such care is by Bindu Desai a neurologist working in the Cooke Country Hospital in Chicago. The *Bhopal Update* which is likely to be a regular feature in future issues is a resumme of health issues, health efforts and on-going medical debates concerning the Bhopal disaster by Padma Prakash. We feature a review article on John Braithwaite's explosive new book on the drug, industry, *Corporate Crimes in the Pharmaceutical Industry* by Ravi Duggal. This book is a must for all concerned people — if one can afford the price !

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THE COLONIAL LEGACY AND THE PUBLIC HEALTH SYSTEM IN INDIA

radhika ramasubban

Colonial health policy in India never really came to grips with the problem of public health. Through the evolution of a 'colonial mode of health care', the enclave sector — the army and the European civilian population —— kept pace with the metropolitan developments in sanitary and medical sciences while attempts to introduce epidemic control and public health measures remained abortive. In the last years of the nineteenth century when the situation afforded a compelling basis for a far-reaching public health policy, the colonial government found an escape route in the new research possibilities. The contradictions of the health system in India arise from its historical legacies. This article traces the various strands which evolved during the period of colonial rule and the manner in which they continue to shape the present public health system.

This article is an abridged version of an earlier research report by the author, "Public Health and Medical Research in India. Their Origins under the Impact of Colonial Policy" (SAREC, 1982).

The task of tackling widespread disease and of raising the health status of the population requires coming to grips with the conditions which cause debility and disease. The three main instruments for such a strategy in the Indian context are thoroughgoing public health measures, improvements in the standard of living of the population through raising incomes and providing employment and making the health services available to those in need. Obviously, the health system alone cannot cope with all these challenges and in a general sense the contradictions of the Indian health system are a reflection of the contradictions of the development process itself. More specifically, the contradictions of the health system in India arise from its historical legacies and the overall framework which guides its nature and functioning.

India missed going through the period of sanitary reform which swept through most of Europe in the 19th and early 20th centuries. Colonial health policy never really came to grips with the problem of public health in India, whereas through a policy of segregation and what evolved into a 'colonial mode of health care', the enclave sector — the army and the European civilian population — kept pace with metropolitan developments in sanitary and medical science. In the absence of general public health measures, epidemics of small pox, cholera, plague and influenza continued to recur among the general population. Some attempts made in the first quarter of the 20th century to evolve epidemic control measures remained abortive due to the administrative disruptions caused by the two world wars and the preoccupation with the health of the army, particularly the control of malaria in the eastern theatre of the second world war.

The independent Indian State, although it recognised public health as one of its main concerns, lacked the commitment to carry through a public health revolution. Seen in the wider historical perspective, the huge expenditure that public health measures require have been incurred by the State in the western countries for ensuring a steady supply of the labour force and for raising its productivity. The capitalist path of development launched in India has remained distorted and slow. It could neither impart dynamism to the public health system as it had very little demands to make, nor could the productive forces develop to the extent which would improve the health status of the population by meeting their nutritional and other basic needs. About half the Indian population is still living below the minimum nutritional standard for meeting the energy requirements of the body and the incidence of diseases preventible through public health measures dominates the disease profile.

The problem with undertaking far reaching public health measures such as protected and adequate water supply, sewerage systems and better housing and nutrition is that it requires massive public expenditure. The independent Indian State, however, has not been able to meet these requirements (Ramasubban, 1984). It has, instead, settled for softer options which are essentially a continuation of the colonial tradition. The attempt here will be to trace the various strands that evolved during the period of colonial rule and the manner in which they continue to shape the present public health system.

The Evolution of Colonial Health Policy

The main factors which shaped colonial health policy in India were its concern for the troops and the European civil official population. The response

to this concern underwent a series of stages corresponding to the growth of knowledge in England about the principles of disease causation. The old climatic theory was that the Indian climate caused diseases in the 'abdominal cavity' while that of Europe caused disease in the 'thoracic cavity' (Scott, 1939). This gave way to the theory of miasma, resulting in a policy of segregation and sanitation which began in the mid-nineteenth century and continued through until the end of the century. The result was the evolution of a distinctly colonial mode of health care. This policy also took into account statistical patterns of mortality and simple prediction of epidemics. The general spread of epidemics resulted, however, in the mobilisation of international opinion, and the perception of the Indian population as a secondary source of infection brought the general population into the ambit of health policy. But the main concern remained the army, and therefore, the evolution of colonial health policy has to be necessarily placed within the framework of the army. The shift in focus in England and Western Europe from sanitation to epidemiology and bacteriology, which began in the 1880's and gained revolutionary momentum in the following decades, had significant implications for India. By the turn of the century, laboratory investigations were instituted in the four army commands, to put army health on modern, scientific principles. Although the direct link between health and medical research remained confined within the framework of the army, the growing interest in, and official patronage for the discipline of tropical medicine in England integrated India, the largest natural disease laboratory in the British empire, into metropolitan scientific activities; and a few laboratories for research were set up within the country.

The army, the main instrument of the East India Company's political consolidation, was primarily composed of Indian soldiers, the European component being outnumbered by roughly eight to one (Imperial Gazetteer of India, 1909). The high cost of transporting European soldiers to India and of invaliding due to sickness, and the time taken in further recruitment and replacement, were the major factors responsible for the excessive reliance on the Indian component.

Mortality, sickness and invaliding in the European army was due mainly to four major diseases: fevers, dysentery and diarrhoea, liver diseases and epidemic cholera, in that order, all of which, particularly the last-mentioned, assumed virulent form when the troops were on the march. And the troops were almost constantly on the march in the prevailing unsettled state of the country.

As regards the European civil population, a large section was concentrated in the three Presidency towns of Calcutta, Bombay and Madras, which were centres of government as well as the major ports. Here European areas of residence were secluded from the Indian areas and along with the cantonments in these towns, were fully self-contained. By the mid-nineteenth century, these areas were relatively well planned and drained and vaccination against small pox (the only effective prophylactic known), among the European civilian residents and among the residents of the cantonments, was almost universal.

The events of 1857 — the 'Indian Mutiny' — highlighted as never before, the importance of the British soldier's health and efficiency. Army health which became the primary concern of colonial health policy remained an abiding concern as, with the expansion of the British empire, the army in India increased in importance as the largest single force in the empire, and as a key instrument in the security of Britain's eastern possession. The 'Mutiny' of 1857 had highlighted the insecurity of British military power in India. Reliance had hitherto been placed on Indian soldiers and they had vastly outnumbered the European component. Although the majority of the Indian troops had remained loyal to the Company and the 'Mutiny' had been successfully quelled, it was decided that the defence of India would henceforth have to be in British hands, and it was resolved that the 'British army serving in India' should form part of the Imperial British army. This necessitated the transfer in 1858 of the European troops of the East India Company to the Crown and a Royal Commission was appointed to work out the army's reorganisation. It recommended raising the number of British troops, and that the ratio of Indian and British soldiers should be of the order of 2 to 1. The result was a 60 per cent increase in the number of British troops. (Imperial Gazetteer of India, 1909)

The result of the increase in the strength of British troops was that one-third of all British forces came to be stationed in India. The problems in acclimatising such large numbers to Indian conditions and ensuring their health, therefore, assumed importance.

Along with the Indian Mutiny, the Crimean war, too, played an active role in focusing discussion in England on the health of the British army. The

Crimean experience had shown that mortality among troops had been due primarily to epidemic ravages and the insanitary state of barracks and hospitals rather than to wounds of war. It highlighted the need to apply the principles of modern sanitary science currently championed in England by sanitarians like Chadwick and John Simon, to the army. In 1857, a Royal Commission was appointed to enquire into the regulations affecting the sanitary conditions of the army, the reorganisation of military hospitals and the treatment of the sick and wounded. The enhanced strength of the British army in India required a similar enquiry into Indian conditions, and in 1859, another Royal Commission was appointed to enquire into the Sanitary State of the Army in India.

Of the total number of deaths in the period examined by the Commission, i. e., 1817 to 1857, only 6 per cent had been due to war. The rest were caused by four major diseases : fevers, causing about 40 per cent of all deaths and three-fourths of all hospital admissions; and dysentery and diarrhoea, liver diseases and cholera being the other killers. Fevers, besides the suffering and immediate risk to life, also had a tendency to relapse dangerously and affect vital organs, resulting in considerable subsequent illness, mortality and invaliding among British troops. At this time 'fevers' was still a general term for most forms of sickness. Clearly, therefore, "the main enemy of the British soldier in India was not the Indian enemy but disease". (Royal Sanitary Commission Report, 1863).

a) Sanitary principles and the policy of segregation.

The situation, however, was neither unfamiliar nor irremediable. The old climatic theory had held that the Indian climate produced diseases distinctly different from those resulting from the English climate. Now, the diseases which were fatal to the British soldier in India were recognised as familiar, as those which had until recently caused the highest mortalities in England, and which had been brought under control in that country through sanitary programmes.

The keynote of metropolitan sanitary science, which grew out of the compulsions of urbanisation in England in the eighteenth and nineteenth centuries, was environmental control. The means through which this was accomplished were mainly town planning, housing and sanitary engineering. These measures required administrative and government institutions embodied in 'local governments', which were responsible for investigation of local insanitary conditions and their control, and given the force of legal sanction through public health legislations.

The physical placement of the European population in India was, as far as possible, based on the principles of this sanitary science. Using criteria of soil, water, air and elevation, the Royal Sanitary Commission on the army in India laid down elaborate norms for the creation and development of distinct areas of European residence, and the 'cantonment', 'civil lines', 'civil station' and 'hill station', regulated by legislations, developed into a colonial mode of health care and sanitation based on the principle of social and physical segregation. From the time of the Royal Commission's Report of 1863, the location and layout of European civil and military areas were determined by criteria of health laid down by the prevailing medical scientific theories of miasma and environmental control rather than by political and strategic criteria. Most of the troops were located at 'hill stations' or on elevated ground. In cases where strategic stations were unhealthy, only small forces were posted there to be reinforced at short notice. Earlier, the 'native lines', i. e., residential areas of Indian soldiers, had been left outside the pale of colonial planning and construction activity for troops. European fears of miasma emanating from them had even led to construction of walls between Indian and European troop locations to keep the miasma out. The Royal Sanitary Commission voiced concern for the health of the Indian troops and recommended that cantonment planning should also be extended to the 'native lines'.

b) Public health machinery : vital statistics and disease control

Following the Royal Commission's Report, Cantonments Acts, Regulations and Codes were issued modelled on public health acts in Britain.

While segregation was an effective tool, at least in the three Presidency towns contact with the native population was unavoidable. Native servants often lived in the native areas, and native dealers and tradesmen serviced the cantonments and civil lines. Grossly insanitary conditions prevailed in these large and unplanned urban centres and the native population could well serve as secondary sources of infection. An understanding of disease among them was, therefore, considered essential. In his despatch to the Government of India the Secretary of State for India pointed out, "The determination of the effects of local causes on the mortality of the

native population, besides its intrinsic value in connection with the welfare of the people of India, cannot fail to have an important bearing on the health of the Europeans resident among them." Gazette of India, 1864).

Three Presidency Sanitary Commissions were set up in 1864. The basis for the functioning of these Commissions was to be the systematic generation of facts about mortality, epidemics and sanitation, which would be embodied in an annual sanitary report to be submitted to the Government of India by the Sanitary Commissioner to the Government of India. This would in turn be summarised in annual reports presented to parliament on the progress of sanitary measures in India. This laid the foundation for a public health machinery, particularly in the field of vital statistics and disease control.

The investigative tradition was an integral part of the sanitary movement concurrently taking place in England; in fact, the first stage of the public health movement was that of governmental investigations on grand scale. Regular statistical reports were also seen as essential to any systematic public health control and since the establishment of the office of the Registrar-General of Births, deaths and Marriages in 1836, the steady accumulation of statistical evidence had generated a demand for further research into the causes of epidemic diseases. (Shryock, 1948)

In keeping with this tradition, the Government of India appointed in 1861, the first systematic enquiry into a major epidemic — the cholera epidemic of 1861. The facts that it highlighted were followed up in the annual sanitary reports, which resulted in a steadily growing volume of statistics and facts about the disease.

The significance of the 1861 epidemic was that its impact was not confined to India alone; it was followed by another epidemic in 1865 which spread from Egypt across Europe to England. Cholera had been the most important factor responsible for initiating the public health era in Britain in the early nineteenth century. The 1861 epidemic provided the final and most powerful spur to sanitary legislation in England. This was the Sanitary Act of 1866 embodying the important principle of compulsion by the central authority if the local sanitary authority failed in its duty.

This epidemic also gave rise to four international sanitary conferences participated in by European countries in 1866, 1874, 1875 and 1885. They devoted their deliberations specifically to this disease and attempted to work out quarantine measures acceptable to all participating countries; systematise existing knowledge about the disease and identify major questions for further investigation; and, recommend measures for prevention. As the 1861 epidemic had originated in India, the first Conference at Constantinople discussed India as a major topic.

The Constantinople Conference put the Imperial government into a quandary by pronouncing India the natural home of cholera. In the absence of any breakthroughs in know edge about the cause and mode of infection, the Conference stressed the need for stricter implementaion of rigorous and lengthy quarantine both in sea and land movements, greater cleanliness and disinfection of ships, houses and merchandise, and care to avoid overcrowding. The central consensus of the Conference was that the spread of cholera epidemics was due to rapid movements of groups of people and their personal effects, water and food supplies. It pronounced that in the case of India the movement of pilgrims and large congregations at fairs and festivals was the single and "most powerful of all the causes which conduce to the development and propagation of epidemics of cholera". (Cholera Committee Report, 1867). In the opinion of the Conference when the pilgrims congregated, the cholera spread among them and when they dispersed they carried the contagion with them over long distances. The Conference recommended elaborate preventive, sanitary and curative arrangements at pilgrim centres and on pilgrim routes.

The international arrangements outlined for quarantine and the recommendation proposed regarding pilgrims, by the Constantinople Conference, were particularly irksome to Great Britain which had the largest international maritime trade as well as the most frequent troop and naval movements to and from its colonies. In the face of stricter quarantine restrictions imposed by the Constantinople Conference and the international pressure to control cholera within India and prevent its spread therefrom, Great Britain responded by instituting its own investigations into the authenticity of a quarantine policy, i. e., whether it was local conditions of soil, air and water rather than contagion carried through people and their effects which caused the spread of epidemics, and whether there was a possibility of coping with cholera through effecting sanitary

improvements rather than quarantine. Professional medical opinion in England also provided support to such a move and a special enquiry came to be sanctioned by the Secretaries of State for War and India into the mode of origin and transmission of cholera.

While the results of the scientific investigation were being awaited, practical sanitary measures were intensified in relation to all cantonments, smaller military stations, troops on the march, jails, hospitals and seaport towns. By 1872 local medical officers in all the various military stations were doing simple qualitative analysis of water. The prohibitions upon soldiers going into the Indian cities or cholera affected areas were more strictly enforced and "sanitary cordons" (suggested by the Constantinople Conference) were erected around cantonments to prevent persons residing in nearby villages and localities and those suspected of carrying cholera, from entering the area. Infected cases in cantonments were isolated and barracks, jails and hospitals fumigated.

Hitherto, troops on the march had been the most vulnerable to cholera attacks. The new sanitary rules governing the marches also included rules regarding railway travel, such as provision of good drinking water and wholesome meals at halting stations, isolation of the troops from the native towns and bazaars en route and at destination, thirty-minute stops every four hours and travel for not more than twelve hours at a stretch.

Systematic statistics about cholera were accumulating with the regular publication of annual sanitary reports. These statistics pointed to direct personal contact as an extremely unlikely cause of infection Nor was land quarantine doing much good; and nor did cholera appear to travel along highways and major lines of communication. As regards sea travel, however, stricter control was instituted, mainly in deference to international pressure.

Until the end of the 1880's, cholera of all diseases pressed most heavily on British soldiers in India, being the most important cause of mortality although not adding significantly to the sickness rates. The investigations of Lewis and Cunningham, by going into the question of sub-soil water levels, had launched on a relatively fruitless line of enquiry which failed to produce conclusive evidence on the cause of cholera. But although their study (Lewis and Cunningham, 1876) made little impact on the control of cholera, it was valuable in that it stressed the importance of looking elsewhere than into, contagion through personal contact. But by the period 1870-79, the combined effect of sanitary measures and other reforms had brought average mortality due to all diseases among European troops down to 19.34 per 1000 of strength, of which cholera accounted for an average of 3.22 (calculated from Annual Sanitary Report for relevant years). By the end of the century the severity of cholera came down even further and after 1900 rarely one person in 10,000 among the European troops came down with cholera (Annual Sanitary Reports, 1899-1929).

The year 1883 was one of the major landmarks in scientific investigation into disease causation. A German Commission led by Robert Koch discovered the Cholera 'Comma' Bacillus in Egypt and visited Calcutta in the same year to confirm the discovery. Koch's discovery was a significant contribution to the germ theory of disease causation which had emerged in Western Europe in the 1860's and studies like his and those by Pasteur, which linked a specific organism with a specific disease, helped to firmly establish the theory in the 1870's and 1880's. This modern scientific revolution in medicine challenged and ultimately triumphed over the earlier miasmatic theories.

c) General Population

The Constantinople Conference's declaration of India as the source of epidemics, its condemnation of the British government for failing to control these epidemics and the latter's own recognition that the Indian population constituted a secondary source of infection, provided the compulsion for broadening the scope of health policy and include the general population in its purview.

In keeping with the theory of contagion, the places of pilgrimage and pilgrim routes became the starting point of health policy in relation to the general population, and the formal motions of attending to the problem were gone through. Committees were appointed and reports prepared. But when it came to giving a concrete course to the policy, however, the government's attitude remained evasive.

While the suggestions of the Constantinople Conference regarding the desirability of sanitary precautions in relation to large groups of people on the move was quickly given effect in the case of troops on the march. In order to prevent

the outbreak of epidemics among them, the question of epidemics at the pilgrim centres was treated as a puzzle, and various other considerations such as finance, religion and race clouded the issue. However, at the 1867 Kumbh Mela, the government as a test case made some ad hoc sanitary and hospital arrangements. These had proved successful in curbing cholera on the fair grounds. But no sooner had the pilgrims dispersed, than the cholera that they carried spread in the regions through which they passed and in their ultimate destinations even as for as 700 miles away. This seemed to imply that not sanitation alone but land quarantine measures were required. The official position was to see this as an intractable problem, for quarantine was not considered to be a feasible measure in the case of people who would be dispersing over a large area. The response of the Government of India was to rest content with the prohibition of pilgrims from entering military stations or even their neighbourhood.

In fact, the whole question of pilgrims taking cholera back with them to their towns and villages raised the uncomfortable issue of an extensive public health machinery for the general population on a continuing basis, which would be the only countervailing force against epidemic cholera emanating from pilgrim movements and congregations.

But sanitary reforms were expensive and unremunerative. The MacKenzie Committee appointed to go into the pilgrim question recommended that the government should undertake the responsibility for at least a few such measures at pilgrim centres. If public health measures for the general population at large could not be adopted, at least the enforcement of conservancy measures at fairs and pilgrim centres and demonstration by the government thereby of the desirability of sanitation would act as an incentive for the general population to voluntarily adopt the modern sanitary principles in towns and villages. The Committee argued that such a step was also in the interests of the European population. But the government rejected the idea of expenditure on conservancy measures and sanitary police at pilgrim centres, and policy floundered on the issue of whether pilgrims should be made to pay for sanitary arrangement through a sanitary tax. (MacKenzie Committee Report, 1868)

Progress on sanitary reforms concerning the general population was blocked on the ground that no measures could be enforced, as any element of compulsion would offend the people's religious sensibilities and be construed as interference in their customs. The bogey of interference in the religion and customs of the people was not new, but was more self consciously applied after the 'Mutiny.' Eighteenth century East India Company officials many of whom recognised in India a superior civilisation, had been replaced in the early nineteenth century by administrators who saw their mission as 'civilizing' and 'modernising' Indian society. Indian society was seen as a *tabula rasa* waiting to be recast in the Western mould. The civilising influence would be Western social and economic institutions and Western religion, i.e., Christianity. After the 'Mutiny', however, the enthusiasm for remaking Indian society declined. The climatic and socio-religious theories gave way to theories of racial exclusiveness, as Britain established itself as the supreme governing power and as the European establishment in the country perfected the mechanisms of physical and social segregation. Indians now came to be seen as a distinctly inferior race incapable of appreciating or successfully adopting British habits and institutions. That interference in social and religious practices would offend Indian sensibilities, was only the rhetoric, offered for government inaction to bring into force a public health machinery and sanitary reforms in India along modern lines.

As far as the people themselves were concerned, the MacKenzie Committee which sought Indian opinion on the matter of sanitary measures at pilgrim centres, found that the people were willing to submit to any measures calculated to promote their health. There was also evidence that the arrangements at Hardwar in 1867 had suitably impressed the pilgrims.

While the government persisted in its evasiveness the railway companies, realising that pilgrims were good business, were cashing in on the age-old enthusiasm of Indians for undertaking pilgrimages. A large number of pilgrim centres existed across the country, and it was the aspiration of every Indian to visit at least one of these centres in his lifetime. There were also certain specific religious festivals which drew large numbers at certain times of the year. In the old days the journey used to be long and arduous and done on foot or by animal carriage. There were accepted pilgrim routes and halting places at villages en route where accommodation and food or facilities for cooking were available

Most of these were free and maintained by philanthropists.

The introduction of railways offered a universal opportunity for undertaking pilgrimages and the possibility of a single person perhaps undertaking several in his lifetime, and railway travel for this purpose became extremely popular. The railway companies responded quickly to this source of profit, offering return tickets and half fares for children. But the facilities were appalling. Pilgrims were stuffed into dirty goods wagons with no ventilation lighting, drinking water and sanitary arrangements on board. The doors used to be fastened from the outside and not opened for hours at a stretch, as allowing the pilgrims to climb in and out at stations en route would cause delays. The few third class carriages allotted for pilgrims were impossibly overcrowded. And for a long time no provision existed for clean accommodation, drinking water or meals at halting stations. Death from suffocation and disease in the goods wagons and cholera epidemics on railway journeys and at pilgrim centres became more frequent as the pilgrim traffic increased and the rapid communications spread disease more rapidly. Pilgrims now poured into holy places in much larger numbers than these places had been provided to cope with and problems of sanitation were further aggravated. Even as cholera had almost disappeared among the troops, epidemics continued to rage among the general population. The Committee which investigated the matter recommended that government move in to check the worst abuses of railway travel and regulate the conditions of pilgrim movements. conveying pilgrims in closed air-tight wagons meant for goods should be discouraged, eating houses at railway stations be licensed, and provisions made for drinking water and toilets at stations.

The salient feature of the pilgrim movement now was that the congregations of people did not take place only at certain times of the year; rather, the pilgrim centres had a constant flow of people round the year. Ad hoc measures, therefore, could no longer be considered an effective solution to the epidemic problem.

The last decade of the nineteenth century was a period of significant landmarks in determining the course of the colonial health policy. The two governing landmarks were the plague epidemic which broke out in Bombay in 1896 and the discovery in India by Ronald Ross of the Indian Medical Service of the mode of transmission in malaria in 1897. The responses to these two events reflected the growing complexity of Britain's international position and rise of British imperialism, Britain's perception of India's place within the Empire the internal changes effected by the Government of India to adapt India to its new role, and the contradictions within the Government of India's policy.

The neglect of public health measures among the general population; accompanied by the intensification of trade and commerce and the growth of population in the seaport towns; as well as the increasing impoverishment in the rural areas and the flow of migrants into the towns and cities in search of work; came to a head when the plague epidemic which broke out in Bombay in 1896 was followed by successive epidemics which spread the disease to large parts of the country, and which by 1918 had taken a toll of almost 10.5 million lives. What was striking was that all the plague deaths occurred only among the Indian population.

Plague was known to have been endemic to Europe since early times but by the end of the seventeenth century it had completely disappeared. When the plague broke out in Bombay, the spread of the epidemic within the city and to other parts of the country combined with the movements of destitute people out of the rural areas and into the towns due to the widespread famine, threw the authorities into a flurry of confused activity. The Bombay plague committee was set up on a crash basis for the period 1897-1898. In the absence of any scientific knowledge about what caused the disease it was treated as contagious. House to house searches were conducted with the aid of police cordons to register deaths and remove sick persons for isolation, dilapidated houses were vacated and disinfected and the inmates removed to camps, rural migrants to the city were detained in camps to prevent disease conditions exacerbating in the city, and at the railway stations passengers and their baggage were disinfected.

But these ad hoc measures were no solution to a situation which was rapidly getting out of hand. The single most important cause of bubonic plague was insanitation which created the conditions for a large number of rats to live in and around human dwellings, and poorly constructed, dark, ill-ventilated houses where rat fleas could take refuse away from air and sunlight which were their most effective killers. As long as drainage, sewerage and planned housing remained severally defective or non-existent, the plague, once introduced, would

continue to remain endemic. The transmission of the disease from the rat to man through the rat flea and not through human contact as in pneumonic plague (familiar to England as the 'Black Death') rendered isolation and detention camps useless.

The plague epidemic could have provided a take-off point for a more far reaching public health policy. True, the unreformed sanitary conditions among the general population exacerbated by the impact of colonial economic policies and natural calamities had worsened public health conditions. While the urban centres were undergoing a haphazard development, the countryside was becoming increasingly impoverished. But the result of the plague innoculation drives, the first major attempt at epidemic control, was the growing awareness of and desire for sanitary reform among the general population. Representations were made by Indians requesting the government to take the initiative in maintaining the struggle against the plague, and in widening the scope of sanitary reform. The need to create an effective public health machinery had also been unequivocally stressed by a body of expert scientific opinion from England who, in elucidating the mode of transmission of bubonic plague, had pointed to insanitation as the single most important cause, and had even drawn up a tentative scheme for public health administration.

The scheme remained unimplemented by the Government of India, and once again, the official response was the rhetoric of caution in quickening the pace of sanitary reform for fear of pressurising public opinion. In fact, as far as the government was concerned, the living conditions of the general population were "beyond the influence of sanitary effort..." (Annual Sanitary Report, 1900-01). Articulated public health policy was growing into one of leaving the Indians to their own efforts.

The plague epidemic and Ronald Ross' malaria breakthrough had been the thereshold for the developments between 1900 and 1935. A step could have been taken in the direction of focusing policy on evolving a public health machinery. However, the possibility of research also presented itself at this moment and the colonial government for its own reasons chose the latter option.

In England, the public health system had come into its own by the time of the scientific advancements in medicine, and the new stream of scientific ideas while they revolutionised health care, did not replace the public health machinery which continued to enjoy a relative autonomy. In India, the metropolitan sanitary science was addre ssed only to the colonial population resulting in what we had earlier referred to as a colonial mode of health care. It, however, had a demonstration effect on the general population, which began to see its potential in the last few years of the nineteenth century.

Public opinion was beginning to form the basis for a potential sanitary movement in India. The Indian elite showed eagerness to lay the foundations in the country for the growth of medical science in which Indians could participate and benefit therefrom. The various international sanitary coneferences and the British Plague Commission were an added source of pressure upon the colonial government to pay attention to public health.

Just at a time when the situation afforded the compelling basis for a far-reaching public health policy, the colonial government found an escape route in the new research possibilities, and public health policy as in the past remained sporadic and ad hoc. The Sanitary Department was most unpopular with the colonial medical bureaucracy and by the time sanitation and public health were made a provincial subject in 1919, the Sanitary Department already lacking a coherent policy or substantial financial provision, was depleted of most of its supervisory personnel. In the remaining decades of colonial rule nothing occurred to change this pattern. No single authority responsible for the efficiency of health measures throughout India came to exist, and nor was there any single Public Health Act as in England. The only concern of the Imperial Government was port quarantine. Vital statistics remained very defective due to the absence of a wide deployment of medical personnel.

With the superceding of the era of active sanitary reform by an era of emerging professionalisation in medicine in England, the consequences for Indian public health in terms of the lost historical possibilities were far-reaching. Medical education had been initiated in the Indian Presidency towns by the mid-nineteenth century, mainly to train hospital assistants for military and civil hospitals. The medical colleges also received a steady influx of Indians right from their inception. When the bacteriological advances of the late

nineteenth century put curative medicine on a scientific basis and led to its increasing professionalisation this served as an argument for colonial policy to encourage the expansion of the private medical profession (ooth European and Indian) — for a few medical colleges were a cheaper alternative to expending goverernment resources on sanitary reforms for the general population. The growth of preventive and social medicine was irremediably pre-empted and the rising medical profession made its spoils from the ever-expanding disease market.

The Present Health System and its Contradictions

The 'functional approach', which sees health as 'fitness' to undertake one's work as a productive member of society, and ill health as the result of malfunctioning of one particular part of the body which can be corrected through medical interventions, arose out of the conditions of maturing capitalist development in Europe in the 19th century, and achieved final consolidation with the development of the germ theory in the last two decades of the 19th century. (Doyal, 1979) But the functional approach could come into its own mainly on the strength of effective declines in mortality and morbidity due to the control of infectious diseases brought about by the State in the pre-germ theory era through effective public health measures which stressed the predominantly environmental — 'filth' or 'miasma' — causes of disease and death.

In India this functional approach, carried over from the experiments during the colonial rule, has remained partial and ineffective. In those spheres where the regular supply of skilled and physically fit manpower has been crucial, as for instance the army and capital - and technology-intensive sectors of the economy, the 'colonial mode has been the preferred pattern : social and physical segregation of employees and their families into exclusive residential areas or housing colonies with clean and sanitary environments, access to subsidised and good quality medical and clinical care, educational facilities, etc. To take care of the possibility that the rampant infection, particularly in the poorer urban areas given their haphazard growth and insanitary environments might break out in epidemic form, vaccinations, hospitals and selective measures for improving drinking water and sewage disposal have been resorted to. Otherwise the rural areas and the urban slums where most of the population lives, remain by and large untouched by the existing health system. For the health system to reach them in any significant way, within the functional approach, requires heavy doses of public expenditure. In the absence of effective preventive measures, the individual's own approach towards health care has been that of coping with repeated attacks of infectious diseases only through medical interventions. The private consumption expenditure on medical and health care as estimated from the 28th round of the NSS in 1973/74 was three times the public expenditure on this activity (Lakdawala, 1978)

Since effecting public health measures through environmental sanitation and provision of housing and safe drinking water is an expensive proposition, the Indian State, helped by advancing medical technology and international assistance, resorted to the easy alternative of tackling communicable diseases through vertical programmes that involved the use of known and tested technology such as vaccination and DDT spraying in the case of small pox and malaria respectively, and isolation and treatment as in the case of the other major communicable diseases such as TB and leprosy. With the exception of vaccination and revaccination against small pox, all the other known medical interventions presupposed the existence of effective public health measures and in a situation where the latter condition did not exist, could be expected to have only limited efficacy.

Next to small pox, the vertical programmes showed some signs of success in the case of malaria, supported through international aid for the import of powerful insecticides and drugs which had proved successful in malaria control in the second world war. Between 1953 when the National Malaria Control Programme started (it was stepped up to 'Eradication' in 1958) and 1965, the incidence of the disease was brought down from around 100 million cases and 1 million deaths to 1 million cases and no reported deaths (GoI, 1977.64 Table 51). These achievements as Cassen (1978:86) has argued, must surely be recognised as the single most important cause for the steep decline in in mortality that India has been able to effect after independence. The 1965 record, however, regressed soon after, and the incidence of malaria has been showing a sharp upward trend (GoI, 1977:64, Table 54). While the resurgence of malaria may not have affected mortality so far because of the dominance of the milder *vivax* malaria, it has grave consequences for the population

particularly since malaria tends to become chronic and debilitates its victims leaving them open to all other infections, and since malaria has been demonstrated to be a major cause of infant mortality. This regression in the case of malaria demonstrates the floundering of the functional approach. Apart from the 'human factor' — premature acceptance of success and complacency in sustaining the momentum of progress — and organisational problems, the main reasons for its failure structural in nature. They emphasise the need for coming to grips with the problems of disturbances in the ecology, centre state relationships, crisis in the economy and the general conditions for research and training. In the absence of planned research even while the eradication programme was in progress, full knowledge of the epidemiology of malaria and the ecology of the mosquito was lacking. Changes in the behaviour of vector and parasite partly due to developed resistance to insecticides and partly due to the disturbances in the ecosystem — in the form of population movements and congregation due to war, floods and large scale public works projects, clearing of forests for cultivation and refugee settlement and large scale use of insecticides in agricultural production, without an integrated approach to the environment — have contributed to the aggravation of malaria in the country (Ramasubban, 1978). The sluggishness on the part of the state governments to commit necessary funds of Malaria Eradication units, initially centrally sponsored and subsequently handed over to the states for the maintenance phase, represents the uneasiness in financial equations between the centre and the states. The shortage of insecticides for malaria control in the wake of the oil price rise and competition from the agricultural sector further highlights the interdependence of the communicable disease control programmes with the rest of the economy.

Epidemic cholera, which alone among the faecally related diseases has come under specific control measures — innoculation and chemotherapeutic measures — has been far more difficult to control, being food and water-borne rather than contagious and finding fertile ground in the widely prevailing unhygienic conditions of food and water use. The incidence of cholera which came down drastically from 176, 307 cases in 1950 to 22,065 in 1954 steadily rose to 66,076 in the following four years, came down briefly to 14,617 in 1959/60 but saw a sudden spurt again to the 1954-59 levels (GoI, 1977). Here, again, the effectiveness of the control measures was greatest in reducing mortality, and the deaths due to cholera which accounted for 2.4 per cent of all deaths towards the end of the colonial rule came down to 0.4 per cent by 1966/67 (Cassen, 1978). But given the absence of protected water supply and environmental sanitation, cholera continues to pose a threat of epidemic outbreaks during droughts, famines and floods.

The policy of vertical programmes for the control of communicable diseases also included TB, leprosy and filariasis. TB has remained more or less firmly entrenched since 1958 (Cassen, 1978 : 90) and nearly 2 per cent of the population is estimated to be suffering from TB, of which 25 per cent are infectious sputum positive cases (GoI, 1980 b). It is significant that in spite of a National Programme for domiciliary treatment launched in 1969, the total number of cases detected as a percentage of total estimated cases is only 30 per cent (GoI, 1980). Although several "operational lapses" were identified as reasons for failure in an assessment done by the Indian Council of Medical Research (ICMR, 1976) the more fundamental problems are those of poor nutrition and overcrowding. Moreover, the chemotherapeutic domiciliary treatment is still too long-drawn (18 months duration) for an average TB patient to sustain, given the long distances to be travelled to the health centres. The deceptive feeling of improvement in the first phase of treatment may also be responsible for discontinuation and relapse, in the absence of regular supervision (Cassen 1978). The growing evidence on the ineffectiveness of BCG in several cases and its temporary nature in providing immunity, points to the inevitability of taking cognisance of the structural factors. The National Leprosy Control Programme which was launched in 1955 has also not made any headway. More than half the population (GoI, 1974) is exposed to the risk of contracting this disease which flourishes under insanitary and overcrowded conditions. There are 3.2 million estimated cases of leprosy in the country of which 20 per cent are infectious and another 20 per cent suffer from various deformities. The total number of cases detected as a percentage of total estimated cases is 60 per cent while disease arrested cases is only 20 per cent, which goes to show that the Control Programme has not really been effective and there has to be a much more concerted effort in controlling this disease. Much the same picture holds for filariasis which came under a Control Programme in 1955.

The control of communicable diseases through vertical programmes poses difficulties because

these diseases have linkages with multiple factors and dealing with them requires socio-economic changes and a concerted action in the field of public health measures. Accomplishment of this task within the context of the health system would require greater expenditure on health by the central and state governments and/or effecting redistribution within the health system in favour of public health measures, and reorientation of health policy, backed by determination to act in that direction, to tilt the balance in favour of the rural areas. Here, again, the main challenge lies in resolving the contradictions giving rise to the dominance of curative services over preventive services, the urban-rural dichotomy and the lack of commitment on the part of the State to provide necessary funds in the health sector.

The Indian medical profession has a longstanding record of service, and in its development it would rank quite high in comparison with many developing countries and is recognised by the Indian population as efficacious and functional in combating disease.

Western medical education had its early origins in colonial policy, when the first medical colleges were set up in the mid-19th century. Right from their inception these colleges received a steady influx of Indians. Around the turn of the century when the bacteriological advances of late 19th century led to the increasing professionalisation of curative medicine in the west, simultaneous with the visible and rapid deterioration in India of the health conditions among the general population, the colonial authorities found it a cheaper alternative to respond to the incidence of disease through extension of medical education and encouraging medical practitioners (both European and Indian) rather than spend government resources on sanitary reforms for the general population. The medical professionals, however, remained concentrated mainly in the urban areas, which also meant constant contact with sources of power. The rural areas remained by and large ignored and left in the hands of the practitioners of the traditional systems of medicine.

The concentration of health services in the urban areas continues even thirty years after independence, and it is only very recently that we are witnessing an increase in the flow of practitioners in the western system of medicine to the rural areas. State action to provide health services to the rural population was initiated through a network of Primary Health Centres (PHCs). The PHCs, when set up, were not meant to remain curative centres. It was envisaged that an integrated preventive, promotive and curative structure could be built into the PHC system, and that this was just a matter of creating a team reflecting the three areas of work. The concern of the PHC, therefore, was meant to be mother and child welfare, control of communicable diseases, environmental sanitation, school health, basic health education, collection of vital statistics, immunisation and medical care services. Obviously too much was being expected from the PHCs and given the overall national bias towards curative and family planning services, the PHCs, too, in practice, soon turned into curative centres.

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* This article is an abridged version of an earlier research report by the author, *Public Health and Medical Reserach in India : Their Origins Under the Impact of British Colonial Policy* (Stockholm, Sarec, 1982). This is also why the detailed reference to source material has been kept to the barest minimum here. While the above-mentioned research report is exclusively concerned with the developments in the colonial period, in this article a section has been added on the present public health system in order to demonstrate the continuities and contradictions arising therefrom. A fuller account of post-Independence developments in health policy, is contained in my paper "The Development of Health Policy in India" in Tim Dyson and Nigel Crook (eds), *India's Demography : Essays on the Contemporary Population* (New Delhi : South Asian Publishers, 1984).

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TRANSFERRING MEDICAL TECHNOLOGY
Reviving an Umbilical Connection?

meera chatterjee

The American Association of Physicians of Indian Origin and the Medical Council of India have recently agreed to sponsor a new scheme for training Indian doctors in the latest medical techniques. This article describes the elements of the scheme and discusses its implications especially in terms of its relevance to the Indian health scene and the dependency relationship it would reestablish and strengthen. The author contends that government has devised an ideal plan to keep an important restless and fairly politicised group — medical professionals — happy at only a small financial outlay. Could this money not be better spent on strengthening existing sources of medical knowledge such as professional foreign journals or available medical equipment? Or for that matter, could the money not be better spent on strengthening basic health care?

The scheme goes into operation sometime this year and needs urgent consideration. We invite readers to critically examine the scheme and to generate debate around the issues it raises in SHR and in other forums as well.

A new scheme to "transfer high technology" in the field of medicine has recently been announced by the Health Ministry. The Ministry has joined hands with the Medical Council of India (MCI) to support a venture of the American Association of Physicians of Indian Origin (AAPIO). We are told that this scheme was cleared "at the highest levels" last year, and will commence during the course of this year *(Statesman,* 1985*)*.

What is the proposed content and mode of functioning of the scheme? From the information available, it appears that Indian doctors residing in the USA will be invited by the Medical Council to train their local counterparts in the latest medical developments. Training will be "on the job", using demonstration techniques — "most probably" on patients. "New" medical technology is to be used. It is proposed to train doctors at 20 centres and in 20 different medical specialities in the next few years. Each group of trainers is expected to consist of 50 doctors. The first such group will travel to the major cities of Bombay, Delhi, Jaipur, Madras and Trivandrum by the end of this year. They will undertake training in urology, neurology, cardiology, etc., staying for "no more than three to seven days" at each centre. The cost of the scheme is intended to be borne by the individual doctors from the US— an estimated 100,000 dollars this year — except for their local transportation and stay costs which will be met by the Indian Government. The scheme is proposed on an "ongoing basis".

Several points need to be made about the proposed scheme and some questions raised alongside. First, one must note that the programme is geared towards the *training* of local specialists in the use of recently developed medical technologies rather than to the transfer of *manufacturing* know-how. It would be interesting to know specifically which medical technologies will receive attention, and whether the equipment involved is manufactured locally. The only clue we have is the emphasis placed on "new" technologies and "specialist" centres and personnel. This leads one to believe that the training might be in sophisticated medical techniques for which the equipment is not locally manufactured. In the absence of specific plans for the concurrent importation of blueprints to manufacture the equipment indigenously, one can only conclude that the government intends to import ready-made equipment from abroad for use by the trained specialists (or has already done so). Is it the government's intention to enter into schemes which provide a market in India for exogenously manufactured equipment? If this be the case, I must opine that the government should not be spending the very scarce resources of the health sector - however little of them - on such an objective.

A second question that must be raised is : Is the scheme a good way to bring local medical specialists up-to-date with the latest technological developments? To answer this question one can compare the circumstances in which the 'trainers' acquired their knowledge, and those in which they seek to impart it. The American medical practitioner practices his speciality in a milieu replete with the latest medical technology. The American doctor is inundated with information on the latest developments through literature, sales men, the media, access to professional associations and speciality conferences

(where, incidentally, a prominent part is usually played by the promoters of new drugs and equipment), not to mention his everyday work environment. On top of all this, according to a spokesman of the AAPIO, US-based doctors study their speciality an extra 50 hours a year to bring themselves abreast of the knowledge required to pass th ir licensing exams.

In contrast, the scheme proposes "three to seven hours" of demonstrations for the local doctors at specialist centres. The Indian medic, though also exposed to a fair amount of promotional literature from drug and equipment firms and some of the other 'aids', does not have an easy access to broad-based scientific literature which can assist him in making reliable judgements on the use of new materials. As a case in point one can cite the rapidity with which private practitioners prescribe the latest formulation of a drug. The culture of "kickbacks" from company salesmen (calendars, plastic knick-knacks, tickets to dinner at a local five-star, free samples, support for travel to conventions, and much more) has tended to subvert the spirit of scientific enquiry, and even clinical ethics. On the other hand, practitioners may hesitate to acquire even time-tested diagnostic equipment at their private clinics, largely because they have no shortage of clients, regardless how 'backward' the service they deliver. (None of this is to say that such abuses do not take place in the US as well, but the points of check-and-balance are considerably different.)

The situation of public medical personnel — including those at specialist centres — is similarly problematic. They work in intensely over-crowded and poorly supplied circumstances. There are severe bureaucratic and financial constraints to the acquisition of new equipments. Adjunct medical libraries are mostly in a sorry shape. Few professional associations bring out high quality journals, and personal subscriptions to foreign ones are prohibitive. There are few incentives or opportunities to upgrade one's knowledge and skills. Thus, the very different milieu of trainers and trainees will make the transfer of knowledge extremely difficult. *One might suggest, provocatively, that the 100,000 dollars the AAPIO proposese to spend annually on airfares to India would be better spent on supporting journal subscriptions for Indian institutions, or on schemes to provide young Registrars and Senior Residents who are anxious to upgrade their skills access to the "interesting"/difficult cases and specialist equipment which are usually nabbed by their seniors.* Such efforts to fertilise the soil before the specialist knowledge is transplanted may result in a richer harvest.

It is in this context that the fact that the proposed scheme does not mention the importation of any equipment or blueprints gains extra significance. "Three to seven hours" of demonstration will not overcome the problem of short supply of equipment extant at most centres. Does the government see this as a lesser constraint to the proper functioning of its health institutions than a lack of training in the "latest medical developments" of its doctors? Of course, much sophisticated medical equipment is already manufactured locally and therefore does not need to, indeed should not, be imported. But the heavy burden on specialist health centres, the lack of adequate procedures and facilities for maintenance and repair of equipment, the bureaucratic red-tape which delays or prevents the acquisition of replacements, as well as the politics and malpractices regarding the use of certain types of equipment at public health institutions remain major problems the government needs to tackle. The third point then is that, even assuming that the training programme is successful in transferring the requisite specialist knowledge, it is difficult to see how the specialists will be able to apply their training given existing conditions.

A fourth and related question is: Are the Indian doctors travelling home from the US the most suitable trainers for our local specialists? We must recall that most of these doctors would have left India after their early medical education, acquiring the bulk of their specialist expertise abroad. Notwithstanding their Indian origins and basic exposure to medical care in India, how appropriate is their practical expertise when transplanted from the sterile, almost martial, atmosphere of a US hospital or clinic, to a local centre where even the supply of gauze and cottonwool, leave alone adequately aseptic instruments and operation theatres, is in doubt? The main reason, however, to concede their suitability (assuming — only momentarily — that a training scheme is necessary or desirable) is that it is difficult to think of a better alternative. Non-Indians from the West have the same handicap, perhaps without the mitigating factor of cultural empathy. Sending local specialists abroad for training is of course a greater burden on the exchequer, and runs the risk both of irrelevance and of further 'brain drain' although this has worked in many instances in the past.

Returning to the proposed scheme, one is compelled to ask, who are the intended beneficiaries? In view of the very short training that will be given and the lack (to our knowledge) of concurrent plans to overcome the bottlenecks of inefficient management, poor logistics, highly politicised working conditions, and low pay that hamper the functioning even of our super-speciality centres, it is doubtful that the local specialist trainees have much to gain. The patients on whom the techniques would be demonstrated would merely be playing the roles of guinea pigs, the likelihood of a spread of benefits to vast numbers being most remote. Thus, one is forced to seek the answer to this fifth question elsewhere, for example, in the participating Association of Physicians or in the individual physician trainers themselves.

As the membership of the AAPIO currently numbers some 25,000, it is worth investigating whether the scheme passes muster on the ground that a sizeable group of important people would be benefited. Simple arithmetic, however, tells us that over the next 16 years (until the year 2000 by which time the world community is striving to achieve "Health for All"), at the current rate of 50 doctors per year, 800 may participate in the scheme. Alternatively, if one allows for a five per cent per annum rate of growth in numbers of participants in the scheme, the total may rise to 1200. Even this higher figure is less than five percent of the current membership of the AAPIO (which will inevitably increase over the years)—a figure so small that one would not expect sizeable benefits to accrue to the Association at large, especially as we have not been told of any mechanisms that the Association proposes to introduce to "spread" the effects of such a scheme among its members. We must remember too that the AAPIO is an umbrella organisation comprised of 15 other associations of Indian physicians resident in the US. The smaller organisations and their members are scattered throughout the country, a land two-and-a-half times the size of our own vast one. Doctors in the US also work under most rigourous, albeit better facilitated and more remunerative, circumstances. *So, how a 1000-odd fellows who have participated in training their counterparts for "three to seven days" on one occasion in India can benefit their own larger community remains to be disclosed.* How their participation in such a scheme can help to bring about the political clout that they aspire to within the American medical fraternity and with the US congress is certainly impossible to see.

In the absence of the possibility of wider fallout from this programme—either to the US-based or indigenous professions, one can only conclude that the main beneficiaries of the scheme would be the participating doctor trainers. To put this into perspective, it must be realised that many of these doctors moved away from the land of their birth and early medical training with feelings of despondency and in search of better opportunity. Thus, we need to consider their participation in the scheme at a purely human level. The scheme provides a mechanism through which they can make up in some small part what they have taken from their homeland and the government (and thereby "the Indian people") in the way of a highly-subsidised and western-oriented medical education. In my ten years of residence in the US, I knew many Indians including professionals in the health field, who felt intense feelings of guilt on this score, and constantly and earnestly searched for ways to assuage this guilt. Another feeling was that of confusion about cultural identity to which many emigres are subject and Indians in the US — doctots included — are no exception. This is manifest in a desire to have both worlds—the better-heeled, more efficient working and living environment of the west, as well as the more "homely", colourful, and meaningful life of India. Thus, the scheme at another level provides an opportunity to bring this dream to fruition. If nostalgia, aged parents, or the search for a prospective son-in-law (a doctor who will quality for a Green Card?) draw participants to the scheme, after the seven days of training will come the family reunion, the shopping spree, the trip to Kashmir. Given the groups of 50 or more, the scheme may be "development tourism" in its most disguised form yet.

In sum it is possible that the doctors of the AAPIO would benefit from this scheme, but as far as I can see the benefits would be social and psychological rather than professional.

Lest the reader misunderstand, let me be perfectly clear. Both the sets of feelings mentioned are perfectly human and one sympathises deeply with those who experience them. But the question here is: is it necessary or appropriate for the Indian government to use its money and materials supporting local transportation and stay costs, not to mention the valuable time of the trainees and the fanfare that will undoubtedly accompany the training, to assist a few individuals (who are fairly comfortably off) to overcome their pangs of conscience or estrangement? I think there are more pressing priorities for the very scarce resources of the health sector.

If the scheme fails the test of its overt intention — professional development — we must consider a sixth issue, its possible "hidden agenda". The first item on this agenda could be the conduct of collaborative research between the two groups of doctors. India, as we well know, provides a huge sea of human beings on which experiments could be conducted, a vast range of pathologies which pose real scientific problems or can be used as "models", and sufficient institutional facilities for highly sophisticated experimentation. Similar material is hard to come by in, say, a US situation while the medical-scientific community there faces immense pressures to do significant original research, "publish or perish". Many Indian practitioners also would welcome opportunities for collaborative research because they may have insufficient funds of their own, they may be devoid of ideas, or they may be facing a problem "getting published" in reputable international journals. These problems could be overcome through collaborative efforts. The scheme under discussion may well intend to foster such 'mutually beneficial' arrangements. As a young doctor friend of mine put it, "in 'three to seven days' there is little the US-based doctor can teach — but much he can learn" and, I would add, arrange.

On the face of it, such collaborative efforts should perhaps be welcomed if they further the cause of science. But the point at issue is whether this government appointed scheme will provide any safeguards against the abuses with which we are aware the system is already rife. While in the west, human experiments and trials are rigidly controlled by law, medical ethics review committees have been widely established (particularly in large hospitals affiliated with teaching or research institutions), and wronged patients or unknowing individuals have legal recourse through malpractice suits, in India the field is almost wide open. We have no laws expressly controlling human experiments, other than torts. The potential of medical technology to be misused in our social and economic context is amply illustrated by the saga of amniocentesis and fatal sex determination, and legal lacunae by the governments inability to bring unscrupulous medical practitioners to book in this case. Ethical guidelines issued by the Indian Council of Medical Research are at best applicable to its own institutions and projects, and not binding on others, nor on private practitioners. Although consent may be sought at hospitals and clinics for various invasive procedures, this is rarely "informed".

There is a second possible item on the scheme's hidden agenda. It may simply be another way of attracting investment from non-resident Indians Indian doctors in the US are certainly a group worth enticing as the most successful among them would have annual earnings of over 1 0,000, dollars and considerable savings. Their membership of associations makes them easy to reach with investment propaganda. The doctors also enjoy prestige among other non-resident Indians (NRIs), and so there could be some 'snowball effects' on investment. Without going into the pros and cons of NRI investment I should like to take a close look at whether the mechanics of this scheme would meet this objective and, more importantly, at what the side effects may be for the country's health system. Regarding the mechanics, I have already pointed out that the number of doctors the scheme can reach is small. Although we do not know yet what criteria would be used by the AAPIO to select participants in the programme, if a good proportion of them are to become investors, selection would have to favour those who are 'commercial-minded' and have large bank accounts. In the US, as in India, wealthier doctors tend to be in private practice rather than in public hospitals or academic institutions. They are likely to be the best participants in the scheme from the investment point of view. But they may not be the best candidates (even from among the members of the AAPIO) from a professional point of view, suggesting a diametral contradiction between the scheme's overt and possible covert aims.

There are also other possible negative "side effects". In the hope of attracting financial investment, are we potentially adding to the "brain drain" of doctors out of the country? We must not be blind to the continued desire of many Indian doctors to emigrate — and this scheme may provide a good opportunity for the 'recruitment' they seek. There is a growing disenchantment with emigration to Africa, the Middle East and the Gulf, and a renewed effort to get to the countries of the west is evident. There may also be signs of a relaxation in the embargoes placed by Western countries on immigration of South Asian doctors five or seven years ago when their health systems were saturated and when a sense of international responsibility in the wake of the Health-for-All movement may have prevailed. A demonstration that an emigrating doctor can have his cake and *roti* too may act unconsciously to motivate others to follow suit. Thus, while the scheme may meet its unspoken investment objective, it may obliquely harm the existing medical services. It is worth recalling the Hippocratic oath - and hoping that our policymakers and the doctors who propose

to participate in the scheme will do the same: "First, do no harm".

As an aside, it is possible of course that this scheme is seen (at the same time as being investment-motivating) to be precisely an answer to the brain drain issue. By making specialist training available locally, it may be hoped that the desire of young doctors to go abroad, ostensibly in search of such training, would diminish. *It is also easy to see that by putting out a relativaly small amount of funds, the government has devised a 'plum' to keep an important, restless, and fairly politicised group of professionals — medical specialists — happy and feeling that India will enter the 21st medical century on time.* Neither of these situations is likely to obtain, however, in the continued presence of the irritants discussed earlier, which motivate both the outmigration phenomenon as well as the political volatility of young doctors.

Another possibility that deserves some consideration is that the scheme has some actual or potential connection with the programme of concessions to attract non-resident Indian professionals to return to India — to reverse the brain drain, as it were. All that needs to be said on this, in the light of the foregoing discussion, is that concessional strategies tend to gloss over the underlying causes of the exodus. Thus, in lieu of them — if there is any connection — the government would do better to concentrate its attention on improving the working conditions of those doctors who remain in India, preventing not just legally but substantively, a further drain.

Returning to the investment possibility, one can further refine it. The government perhaps hopes that the US-based doctors will invest not just generally in Indian enterprises, but specifically in the medical and health sector. It may be with such prescience that the vice-president of the AAPIO has expressed confidence "that this Scheme will do a lot of good to the cause of the Indian medical services" (for, as we have suggested, it is unlikely that the training itself will achieve this broadside.) The dual health economy is well-ensconced in India. Many large hospitals and specialist treatment centres have been established by private investors including major industrial houses such as the Mafatlal and Modi groups. Privatisation is also being seen as the future mode. The recently-framed National Health Policy specifically calls for the encouragement of private investment in speciality and super-speciality services, as well as for the government to "utilise and assist" private voluntary organisations to participate in health services. At one level, these are welcome suggestions because of the innovation likely to be brought to the health sector through these mechanisms, and more so because they are intended to reduce government expenditures for sophisticated medical care, thereby making more monies available for primary health care and public health services. The proposed scheme may be seen as a step in this direction, but there is also the grave possibility that the cart has been put in front of the horse. There is already considerable investment in specialist health facilities in terms of their share of the health pie. What is needed, first, for "health for all" is a reallocation of funds (at least **plan** funds) to rural health schemes. It is also essential to enlarge the total allocation to health. To put further investment into the sophisticated medical sector (however small the amount) without such reallocation is to relegate much of the National Health Policy to the status of a lame duck. If the budget to the health sector does not increase, both in real terms and in terms of per cent of GNP, such skewed investment may be tantamount to the government opting out of health for all altogether. To attempt to attract external investment through a scheme "update" specialised medical personnel in the "latest developments in medical science" is to give the lame duck a further kick in the pants.

This brings us the most crucial question of all : is the proposed scheme relevant at all to the country's needs? The National Health Policy itself has called the existing system of sophisticated health services "inappropriate and irrelevant" to the country's needs. Is a scheme which proposes to upgrade them any less so? The specialities mentioned thus far are certainly not those required to treat the major diseases or prevent the untimely deaths in our country. In this respect, the scheme is what Lewis Thomas has called "halfway" technology rather than "real high technology" which is addressed to significant problems, is effective, inexpensive and inconspicuous. In the latter category are many potential points of collaboration between the government and the AAPIO.

If the government is at all serious about its commitment to primary health care, it should perhaps encourage the AAPIO to 'invest' in establishing clinics to supply basic health care and medicines to the remotest rural areas, and to "donate" personnel time to training trainers

of village health workers. But note : any collaborative venture or technology-transfer must resist the malproportions of one of Mr Raj Narain's efforts to provide medical services to rural areas. If the import of the 300-odd over-sized mobile medical vans has come to be known as the "white elephant scheme", any encore deserves worse epithets. If the absorption of such donations into the public rural health sector presents problems, there are innumerable private, community-based health programmes which would do good work with them. Thus, the two aforementioned aims of the Health Policy might be collapsed into one more in keeping with its overall intention — private collaborative enterprise for rural health care. However, I broach this idea with caution because, of course, the countryside is also dotted with agencies who wouldn't do any work at all, there are many examples of foreign donations being frittered away, and I know of atleast one major unhappy experience of an NRI-supported rural "enterpreneurship' programme going awry. The point here is simply that the challenge lies in rural health, and that a programme of greater benefit to more people than the proposed one might be designed around this challenge. Even the small funds envisioned to be spent on this scheme could be used to establish basic health care, so that by the end of the century a few more of our countrymen and women and children might be closer to the dream that is "health for all". As it is currently conceived, the proposed scheme may reestablish an umbilical connection, but the product is likely to be stillborn.

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BHOPAL NEEDS YOU

In March the Medico Friend Circle — a group of doctors and health workers — undertook a systematic study of the affected population in Bhopal. In the coming months they will publish the report of the study and plan to disseminate the information mainly to the local population, to doctors and to the health establishment and to voluntary groups and activists working in and on Bhopal. Follow-up plans also include a study of pregnancy outcome since the disaster.

MFC appeals for your support, donations and involvement all of which are urgently needed. Cheques may be sent in favour of MFC Bhopal Fund. For further information contact : Dr. Ravi Narayan, 326 V, Main, I Black Koramangala, Bangalore 560 034.

Some Good News on the Drug front at last !

Ciba Geigy has withdrawn clioquinol containing and related drugs from March 31, 1985. This group of hydroxyquinolines have been proven responsible for a serious nerve disease SMON (subacute myelo-optic neuropathy). The drugs withdrawn are Mexaform, Entobex and Enterovioform.
(From: Pune Journal of Continuing Health Education)

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MONOPOLY CAPITAL AND THE REORGANISATION OF THE HEALTH SECTOR

j warren salmon

The 'health care crisis' proclaimed by Richard Nixon in 1971 revealed the health sector's interconnections with the overall political economy. These extend simultaneously to problems in the health status of the people; the effectiveness of medicine itself, and the organisation and financing of medical care services. The ruling class has attempted to resolve the present crisis by introducing a structural reorganisation of the health sector. The corporate class has become increasingly active in health policy and programme development at national as well as local levels. This article, reproduced from 'Review of Radical Political Economy' briefly looks at the role of monopoly capital in this reorganisation. What is the capitalist perspective on the crisis in health care ? How are they advancing their class interests by themselves and through the state for a redesigned health care delivery system? The author reviews the discussions, activities and important publications of a few selected capitalist planning bodies, showing their ideological development as they educate the corporate class. These discussions are a key to shaping a class stand to eventually transform health services delivery under monopoly control.

"There is a better way to go and that would be to strip the medical societies of the power to inhibit more efficient methods of delivering medical care — corporate organisation, for example — and the various restrictions on competition."

Editorial, *Wall Street Journal*
January 16, 1976

The present organisation of the health sector, with its excessive use of resources, has come into contradiction with the needs of monopoly capitalism today. A petty-bourgeois mode of health services (structured around solo fee-for-service medical practice and cost-reimbursed hospital care) will yield over the next few decades to a new, qualitatively different stage of development[1]. This emerging delivery system may eventually be dominated by Health Maintenance Organisations (prepaid group medical practices) sponsored by large corporations financed by some form of national health insurance, and regulated by corporate-controlled planning bodies.[2]

Monopoly capital recognizes the health services industry as organisationally backward compared to other sectors of the economy. Although several modes of production coexist, a small scale mode still predominates, principally controlled by petty-bourgeois physicians. This condition entails institutionalised waste, including low productivity of the health labor force, substantial clinically unnecessary care (and its related high hospital utilisation), and the allocation of substantial resources to non-productive segments of the population (e. g., the poor, disabled, aged). From the monopoly capitalist perspective, the health sector diverts a substantial portion of state funds and an increasing amount of variable capital costs (in the form of fringe benefits) from the sphere of monopoly capital. The surplus generated in the delivery of medical care is chiefly appropriated by physicians, hospitals, medical schools, and nursing homes[3].

These conditions contribute to escalating and yet-to-be controlled costs,[4] under the present organisational form and control. There are two aspects of this cost problem.

1) 118.5 billion dollars were spent for health services in 1975, more than a 200 percent rise since 1965. Health expenditures are thus rising more rapidly than the overall rate of inflation in the economy, propelling them to 8.3 percent of the GNP last year.

2) 57.9 billion dollars were spent by government — 42.2 percent of these total expenditures — and is critical in light of the fiscal crisis of the state.[5]

Over the past decade the federal and state governments have instituted increasing cost controls; however, the cumulative effect of these policies has been minimal.[6]

This problem of escalating costs is related to an additional one concerning doubts about the general effectiveness of medical care services in ameliorating disease patterns related to heart, cancer and stroke. The leading mortality indicators for Americans under 45 — accidents, suicide and homicide — are conditions which the medical care system does not, and cannot, address, given its present form.[7] Studies are showing that health levels are not altered significantly now by incremental medical care services[8]. A growing ideological

response may shift attention away from medical care institutions to contain the costs of the health sector."

The drastic decline of U.S. power in the world capitalist system has shaped an international situation which has aggravated the acute domestic stagnation. To cope with these conditions, the capitalist class has been looking more and more at the potential of the health services industry for greater social efficiency. In the present economic crisis, the containment of social consumption expenses can provide funds for private investment in the production sectors. Health policy has been encouraging attempts at general rationalization (cost cutting, profit maximization, forcing higher productivity).

At the same time, various segments of capital are responding to opportunities for greater profits to be derived from both the production of health services[10] and the circulation of commodities through the health sector (e.g. drugs, hospital equipment and supply, construction, systems and communications, legal, accounting and management services, etc).[11] As industrialisation proceeds in the health sector (mass production, elaboration of the division of labour, greater capital intensification, bureaucratisation, etc.), these industries will seek greater capital flows toward the sector.

Renaud has demonstrated how capitalist growth, while giving rise to disease patterns in society, also institutionalises "solutions" to disease which are compatible with capitalism, in the form of a commodification of health services.[12] With alienation and disease creating a greater dependency by the working class on health (and other human) services, these services must function more and more as mechanisms for social control.[13] However, the present structure of health care delivery has not developed sufficiently for monopoly capitalism today. A new organisational form is required, and it will arise under conditions similar to those other sectors where petty-bourgeois or pre-capitalist forms historically were smashed or co-opted.[14]

It is surely not new for capitalists to be actively restructuring the health sector. Berliner has detailed how the Carnegie and Rockefeller Foundations in the beginning of the century virtually rebuilt the entire medical care system by endowing research institutes and selected medical schools.[15] This intervention strongly influenced the rise of the presently-dominant organizational form in the health sector, which has served through to the present period.

Stagnation and crises necessitate a growing awareness of monopoly capital's common interests (as well as its conflicts). The coming together of major capital segments to discuss and formulate general policies in itself yields a greater measure of class consciousness.[16] Policy-planning organisations, (such as the Trilateral Commission, Business Council, Comittee for Economic Development, Business Roundtable, etc.) have lately become the arenas for working out programs for the capitalist class as a whole. Their activities provide a system of cooperative interpersonal and interorganisational relationships based upon a commonly-held class perspective. The role of these "consensus-seeking" groups becomes critical, with the mounting contradictions of advanced capitalism and the crescendo of challenges to the American capitalist system on both the international and domestic levels.[17]

Today the "class-conscious corporate directorate"[18] is speaking directly to monopoly capital's needs from the health sector in a number of important publications and conferences. The following sections will review a few of the activities of selected planning bodies, showing their ideological development as they educate the corporate class. As yet, no definitive analysis on the nature and function of the health sector has developed, nor has a comprehensive strategy for the capitalist class as a whole emerged. Nevertheless, a class stand is shaping as the problems for monopoly capital are detailed and potential solutions are discussed.

In contrast to the last decade, *Fortune*, *Forbes*, *Business Week* and the *Wall Street Journal* have been devoting major amounts of space to health care problems and editorializing for a changed structure to favor capitalist interests.[22] The *National Journal* provides frequent indepth analyses of health care issues to apprise business leaders of legislative developments. All of this interest by the business press (coupled with the popular media's attention to health and health care inadequacies)[19] is a marked escalation over their coverage prior to 1970 — a change which parallels the new interest by capitalist planning bodies

Committee for Economic Development

The Committee for Economic Development (CED) is one of the central educational and policy-making organisations of the corporate class; Domhoff calls it the "major spokesman for the

business viewpoint." Highly influential in state policy formulation, it addresses their societal concerns in lengthy policy statements.[20] It represents a more "progressive" capitalist perspective (generally the longer view of reshaping society) and produces studies that are somewhat broader and less detailed than the issues analysed by the liberal Brookings Institution[21] or the right-wing American Enterprise Institute for Public Policy Research (AEI).[22]

The CED provided a beginning outline of their design for the health sector in a report entitled *Building a National Health Care System* in April 1973. It recommended health maintenance organisations (both profit-making and nonprofit) for restructuring the delivery system. A health maintenance organisation brings together a comprehensive range of medical services into a single organisation, providing services in a benefit package for a fixed contract fee which is paid in advance. A proposal was made for health care providers to be financed through prospective budgeting, with fees and charges fixed in advance. A national health insurance program, providing a basic level of health benefits for all Americans, would be administered by a National Health Insurance Advisory Board. This basic benefit package for *all* Americans, of course, would be a phased and "practical program that does not raise false hopes by promising services that cannot be made available and does not lead to unwarranted increases in costs with little benefit to people."[23] Three categories of financing would be established: 1) employer-based insurance would be phased in for all workers and their dependents; 2) Medicare would be retained for the aged and disabled, 3) care for the poor, nearpoor, unemployed, and others would be provided through federally-sponsored community trusteeships. The policy statement further recommended a control and planning mechanism — which has now been enacted in Public Law 93-641, The National Health Planning and Resources Development Act of 1974.

In short the statement by the Committee for Economic Development essentially endorsed the health policy of the Nixon Administration and countered most of the stands taken by the American Medical Association, which has fought all attempts at restructuring and cost control.

The Business Roundtable

Perhaps the major capitalist lobbying group on health care has become the Business Roundtable (BR) and its associated Washington Business Group on Health. Made up of the chief executive officers of the 160 largest corporations, BR was formed in the early 1970's to develop class discussions and to formulate corporate policy on labor problems.

In June 1974 the Business Roundtable convened a conference on health care legislation to build a consensus among chief executive officers about what business should be getting from the health sector. In an opening address, the chairman of Eli Lilly Company, the drug manufacturer, noted that "at a recent meeting of the Business Roundtable there was complete agreement that the importance of the health issue to every company should have a very high priority as an issue in future months towards which we should devote our continued and dedicated attention."[24] The panel of speakers was impressive. Chairman of the Business Roundtable's Subcommittee on Health Policy; Chairman of the CED Health Policy Committee; former Congressman William Roy; who authored the Health Maintenace Organisation Act of 1973; a representative from the office of the HEW Assistant Secretary for Health and Scientific Affairs; and Russell Long, Senate Finance Committee Chairman and sponsor of a health insurance bill. While endorsement was encouraged for Senator Paul Fannin's National Health Standards Act (the national health insurance bill of the Chamber of Commerce), what seemed to be emerging was a firm conviction that restructuring the delivery system was a necessity before legislation on the national financing of health care. In the midst of the recession, coupled with the state's fiscal problems, capital was displaying its fear of increased labor costs.

The Conference Board

The Conference Board based in New York City, is a research organisation concerned with "business economics and business management." Its numerous studies address problems of the firm, which it then relates in its published findings to social policy issues. Their message promotes the common interest of capital in the "efficient operation and sound development of voluntary productive enterprise."

The CB conducted several extensive studies on health care funded by the U.S. Department of Health, Education and Welfare and a consortium of large corporations and foundations. *Top Executives View Health Care Issues* (1972), the first product of this broad CB study in health, surveyed 118 executives about: 1) the nature of the nation's major health problems, the need for new legislation to deal with them, and the particular pending

legislation; 2) the ways in which health costs to business might best be controlled; 3) the desirability of companies creating or expanding their own in-house medical services; 4) a strong business role in community efforts at health services planning, controlling hospital and other health costs, and developing prepaid group practice plans and other new health delivery forms; 5) potential changes over the next decade in corporate health care activities; and 6) the order or priority that business should assign to health care relative to other social issues (e.g. environment, product safety, minority employment and urban redevelopment).

A subsequent study on *Industry Roles in Health Care* surveyed eight hundred large firms to provide a statistical examination of present corporate health care programs. The narrative description of these programs and the suggestions on the "appropriate management response" to the health sector delineate specific policies and activities of corporations in restructuring health care delivery arrangements for their workers and surrounding communities.

Another publication, *National Health Insurance and Corporate Benefit Plans* grew out of two surveys on corporate health programs (a separate one on executive health), which secured the cooperation of 1800 companies for their extensive detail. The national health insurance bills before Congress were analyzed for their effect on industry benefit plans, along with an assessment of labor union attitudes and actions. The report concluded that "a substantive intervention by the Federal Government would have a major impact on the benefit planning, cost sharing, and bargaining, but little direct effect on the benefit coverages to be provided to workers. Benefits to low-wage workers and unemployed would increase greatly "[26]

These reports provided a foundation to the forward and sophisticated thinking presented by the speakers in a CB-sponsored *Health Care Issues for Industry* Conference in April 1974. Over 200 corporate executives and health and government representatives met to discuss the "heavy health-related costs in the form of taxes, employee benefits, workmen's compensation, absenteeism, impaired productivity, and business stake in the allocation of the nation's resources and the health of its economy."[27] Walter Hamilton, former Deputy Assistant Secretary of Commerce under the Nixon Administration and now a CB Vice President, began the conference by observing that health care is "an industry whose methods and structures the business community has both the right and the obligation to study and seek to improve."[28] Dr. Paul M Ellwood, Jr., the chief architect of the Nixon Administration's Health Maintenance Organization Strategy, decried the lack of capitalist leadership in designing national health policy and suggested that:

". . free enterprise solutions that have been effective in solving the problems of conventional business can be applied with similar effect within the health industry, and that you are in the position to apply them. In other words, I am suggesting that you take certain active steps to make the health care market work, by encouraging HMOs to compete with the present system on the basis of prices and benefits."[29]

Dr. G.H. Collings, Medical Director of New York Telephone Company, urged corporations to become the "health care manager" for workers through their industrial medicine departments. An executive of Kaiser-Permanente, the largest HMO in the country with over two million subscribers, presented information on a cost-benefit analysis of occupational health measures to aid companies. A corporate officer from Motorola discussed his company's conflicts with hospitals in Phoenix, Arizona and Motorola's attempts in the community to contain their costs. A vicepresident of General Mills spoke of the corporate-sponsored HMO effort being designed and implemented in the Twin Cities area. Equitable, Prudential, Honeywell, General Mills, 3M, Pillsbury, and Mutual of New York are among the twenty corporations there reporting attempts to centralize health services into health maintenance organizations. With the information on the nature and extent of corporate involvement in health care activities from this conference and the CB studies, monopoly capital has positioned itself to initiate a more class-conscious analysis of the health sector and its relation to capital accumulation.

The Health Manitenance Organisation Strategy

Active state intervention to restructure the health sector was taking place amidst these conferences and publications by capitalist planning bodies and the upsurge in volume of health articles in the business press. The HMO strategy initiated by the Nixon Administration in 1970 had created an awareness among monopoly capital firms of investment possibilities in health care delivery. It was designed for "using the forces of the private sector" to "modify the entire system of health care."[30] Dr.

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". . free enterprise solutions that have been effective in solving the problems of conventional business can be applied with similar effect within the health industry, and that you are in the position to apply them. In other words, I am suggesting that you take certain active steps to make the health care market work, by encouraging HMOs to compete with the present system on the basis of prices and benefits."[29]

Dr. G.H. Collings, Medical Director of New York Telephone Company, urged corporations to become the "health care manager" for workers through their industrial medicine departments. An executive of Kaiser-Permanente, the largest HMO in the country with over two million subscribers, presented information on a cost-benefit analysis of occupational health measures to aid companies. A corporate officer from Motorola discussed his company's conflicts with hospitals in Phoenix, Arizona and Motorola's attempts in the community to contain their costs. A vicepresident of General Mills spoke of the corporate-sponsored HMO effort being designed and implemented in the Twin Cities area. Equitable, Prudential, Honeywell, General Mills, 3M, Pillsbury, and Mutual of New York are among the twenty corporations there reporting attempts to centralize health services into health maintenance organizations. With the information on the nature and extent of corporate involvement in health care activities from this conference and the CB studies, monopoly capital has positioned itself to initiate a more class-conscious analysis of the health sector and its relation to capital accumulation.

The Health Manitenance Organisation Strategy

Active state intervention to restructure the health sector was taking place amidst these conferences and publications by capitalist planning bodies and the upsurge in volume of health articles in the business press. The HMO strategy initiated by the Nixon Administration in 1970 had created an awareness among monopoly capital firms of investment possibilities in health care delivery. It was designed for "using the forces of the private sector" to "modify the entire system of health care."[30] Dr.

Paul Ellwood[31] of *Interstudy*, a health policy think-tank, has consulted extensively with large corporations urging them to establish profit-making HMOs, converting their industrial medical departments into HMOs in order to "realize a susbstantial savings over present health expenditures for employee health care benefits.."[32] Through changing the present "sickness-oriented, piece-work basis" of the delivery system, the HMO creates a profit motive "to concentrate on keeping people healthy" and provide "greater efficiency."[33] HMO patients have a markedly lower rate of hospital admissions and a shorter length of stay than those covered by indemnity insurance plans of Blue Cross and the commercial insurance companies. According to Ellwood, HMOs would strengthen the role of competition by introducing economic incentives, and minimize the need for regulation by relying upon market mechanisms. Ellwood's dream of a revamped delivery system envisioned approximately 1000 HMOs across the country, organized similarly to large corporations (possibly as their subsidiaries) to serve up to serveral million persons each. One of his latest suggestions, as an ideological entrepreneur on health for the capitalist class, urges federal government subsidies (up to one million per year) for the nation-wide expansion of the "superclinics" (e.g. Mayo, Cleveland, Palo Alto, Marshfield, Geisinger, etc) as models for a national network of HMOs.[34] The state's role in this redesign of the delivery system would enhance monopolization and assure a rationalized organizational form.

To stimulate corporate-controlled HMOs, HEW under the Nixon Administration designed a program to attract funds from venture capital and investment banking firms, commercial insurance companies, and banks. Capitalist interest in HMO operations, both as commercial ventures and as a more efficient organization of present health care providers, rose as they understood how HMOs could control the runaway costs of the health sector and contain their labour costs.[35] A list of corporations who have been involved in HMO activity reads like the Fortune 500: Westinghouse, Texas Instruments, Sun Oil, North American Rockwell, Zenith, General Foods, DuPont, IBM, Kodak, Xerox, Upjohn, Mobil Oil, Standard Oil of Indiana, and a few dozen others. However, tight money over the past few years and the lack of substantial financing of the Health Maintenance Organization Act of 1973 (P.L. 93-222) by the Ford Administration have temporarily slowed this whole development.

Both profit and non-profit HMO plans have continued to expand, having doubled their enrollment (to approximately 8 million persons) over the past three years in 178 HMOs across the country.[36] However, new HMO projects are dependent on corporate and union support in their "marketing" activity (i.e., acquiring enrollees) to ensure their existence and growth. With the economy on the upswing and several problems resolved in the new HMO law, corporations may reinstitute their involvement in HMO activities and follow the example of R.J. Reynolds, which this year established its own HMO for its workers.[37] The National Association of Employers for HMOs, based in Minneapolis, was just formed this year by several corporations to guide firms in their HMO development.

Occupational Medicine Developments

While monopoly capital's investment in HMOs has not reached levels predicted by the Nixon Administration, corporate medical directors and employee benefits managers nevertheless have been developing mechanisms within their firms to eventually integrate industrial medicine and occupational health programs with the medical care of workers' families. Writing in a special issue on HMOs of the *Journal of Occupational Medicine*, one corporate medical director evoked the view that: "the scope of proper concern of the occupational physician has expanded quite far beyond his involvement with occupational injuries and disease. It now extends to the non-occupational health problems of the worker and his dependents, and the ways in which the health services they require are organized, delivered, and paid for."[38]

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This ideological thrust,[41] coupled with actual program formulation,[42] by industrial medicine physicians, represents a slow but deliberate shift which may lead to a personnel system in which the firm will be able to provide health maintenance services to assure the productivity of the individual worker. This implies a profound change in

the content and control of medicine from that practiced today.[43]

In a larger context, the employer as "health care manager" will deal with worker alienation and disease, contain laborpower reproductive costs, and promote greater social control in an attempt to reduce the level of absenteeism and disability, turnover rates, wildcat strikes, sabotage, and poor quality products. The development of workplace medicine is one more step in the transfer of health services delivery to eventual monopoly capital control.

Directions and Contradictions

While these conditions are shaped and shape themselves from the outside, rapid change is concurrently happening within the health sector. Concentration and centralization in the production of medical care services have been rearranging patterns of control in the financing and delivery of care. Health industry groups such as the American Hospital Association, Group Health Association of America and Blue Cross are becoming more closely aligned with monopoly capital. Stimulated by increased efforts for bureaucratization and the application of managerial economics, the industrialization process in the health sector is bringing forth fundamental changes in its social relations of production. Meanwhile, regional planning efforts by health systems agencies and the forthcoming passage of some form of national health insurance may help create material conditions for further monopolization and a greater capitalist invasion.

As the rationalization of health services occurs during the present period of economic crisis, monopoly capital's class stand on health policy is being developed. Discussions have been centering around containing cost inflation in health care, redirecting medical dollar flows through the monopoly sphere, and eventual consolidation of health services delivery by large corporations. Recognition of their interest in more rational and precise social investment may lead monopoly capital to mold an organizational reflection of their need for human capital maintenance.

As the larger crisis of accumulation is addressed, the outlook of monopoly capital is becoming more highly developed. How capital can assure stability and predictability in the international and domestic situations is certainly receiving more and more class attention and action. It is crucial for us to analytically grasp this beginning ruling class coordination in the health sector also.

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5. James O'Connor, *The Fiscal Crisis of the State* (New York: St. Martin's Press, 1973).

6. The federal government has adopted cost containment measures through the economic stabilization program: utilization review of hospitalizations under Medicare insurance for the aged and Medicaid for the poor; monitoring hospital admissions and length of stay by Professional Standards Review Organization, federally-mandated organizations set up by county medical societies; and authorities for planning construction and equipment purchases given to new regional health systems agencies. Futher, state governments have regulated commercial and non-profit insurance firms, and enacted certificate-of-need legislation for hospital and nurs-

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ing home facilities construction, and hospital rate-setting legislation. See: Anthony R. Kover and Edward J. Husk, "State Regulation of Health Care Costs" *Medical Care* 13.8, August, 1975, pp. 619-629.

7. Victor Fuchs, *Who Shall Live? Health, Economics and Social Choice* (New York: Basic Books, Inc., 1974)

8. Lee Benham and Alexandra Benham, 'The Impact of Incremental Medical Services on Health Status, 1963-1970' in Ronald Anderson, et al. *Equity in Health Services* (Cambridge, Massachusetts: Ballinger Publishing, 1975); and Victor R. Fuchs, *Who Shall Live: Health, Economics and Social Choice* (New York: Basic Books, 1974).

9. By no means has any consensus been reached from outside or within the health sector: nevertheless, the critiques of medicine are being given serious attention. See Howard Berliners "Emerging Ideologies in Medicine." *Review of Radical Political Economics*.

10 For detail on capitalist inroads in health care delivery, see: J. Warren Salmon, "The Health Maintenance Organization Strategy: A Corporate Takeover of Health Services Delivery", *International Journal of Health Services* 5:4, 1975, pp. 605-623.

11. For a detailed description of the functions of the health sector and the production and realization of surplus value in health, see Leonard Rodberg and Gelvin Stevenson, "Health Care Industry in Advanced Capitalism," *Review of Radical Political Economics* (this issue).

12. Marc Renaud, "On The Structural Constraints to State Intervention in Health, *International Journal of Health Services* 5:4, 1975, pp. 559-572.

13. Gelvin Stevenson, "Social Relations of Production and Consumption in Human Service Occupations" *Monthly Review* July-August 1976, pp. 78-87.

14. Maurice Dobb, *Capitalism, Development and planning* (London : Routledge and Kegan Paul, 1967)

15. Howard Berliner, "A Larger Perspective on the Flexner Report," *International Journal of Health Services* 5:4, 1975, pp. 513-592.

16. See the entire issue of: G. William Domhoff (ed). "New Directions in Power Structure Research" *The Insurgent Sociologist* 5:3, Spring 1975.

17. Notwithstanding the instrumentalist overtones here the author is merely stating that *Conditions* are propelling this development. Limitations, both on theoretical and empirical levels, exist in power structure analysis of this sort and obviously the varying theories of the state must be considered. See John Mollenkapf, "Theories of the State and Power Structure Research "*Insurgent Sociologist* 5:3 Spring 1975, pp. 245 - 264.

18. James O'Connor, *The Fiscal Crisis of the State*, p. III

19, Perhaps the first major indictment by monopoly capital against the health sector was the entire January, 1970 issue of *Fortune* 81:1 entitled, "Our Ailing Medical System". The issue strongly advocated health maintenance organizations as did M. Rothfield, "Sensible Surgery for Swelling Medical Costs" *Fortune* 88.4. 1973, pp. 110-119: "Is There an HMO in Your Future?" *Forbes* March 15, 1973, p. 21; "A Revolutionary Plan to Keep People Healthy" *Business Week*, January 12, 1974, p. 58 "Still Waiting for that Revolutionary Health Plan." *Business Week* January 13, 1975, p 53, Dublin. "Unhealthy Start: Prepaid Medical Plans Run Into Difficulties as Enrollment Falters," *Wall Street Journal* February 11, 1975, p. I, plus numerous other articles on aspects of the health care crisis.

20. Every major television network ran specials on the health care crisis. Today newspapers and magazines follow health care developments quite extensively often not missing opportunities to attack the present medical care structure. For example, see the week of front page articles in the *New York Times* January 26-30, 1975.

21. On each of its policy statements the CED writes that "by enabling businessmen to demonstrate constructively their concern for the general welfare, it is helping business to earn and maintain the national and community respect essential to the successful functioning of the free enterprise capitalist system." It is not uncommon for a CED policy statement to precede federal policy or legislation on the issue.

22. The Brookings Institution in Washington, D.C. has published the following studies related to health care: Rashi Fein. *The Doctor Shortage: An Economic Diagnosis*: Herman Miles Somers and Anne Ramsay Somers, *Medicare and the Hospitals: Issues and Prospect* : Karen Davis, *National Health Insurance: Benefits. Costs and Consequences* : among others.

23. In 1973 the AEI established a Centre for Health Policy Research which has published:

C Stewart and C. Siddayao, *Increasing the Supply of Medical Persone! Regulating Health Facilities Construction* proceedings of an AEI Conference; Judith R. Lave and Lester B. Lave. *The Hospital Construction Act*: Sam Petlzman, *Regulation of Pharmaceutical Innovation*. Rita R. Campbell, *Food Safety Regulation*: a legislative analysis. *National Health Insurance Proposals*: David Schwartzman. *The Expected Rate of Return From Pharmaceutical Research*: William M. Wardell and Louis Lasagna *Regulation and Drug Development*: Alex R. Maurizi, *Public Policy and the Dental Care Market*. Cotton M. Lindsay, *Veteran: Administration Hospitals. An Economic Analysis of Government Enterprise*: *Drug Development and Marketing. Proceedings of an AEI Conference, Health Insurance What Should Be The Federal Role?* proceedings of an AEI Roundtable television show: and Robert Stewart Smith. *The Occupational Safety and Health Act. Its Goals and its Achievement* Quite an extensive undertaking for only three years work! See also: David Pauly, "Celebration on the Right." *Newsweek*, May 17, 1976. p. 81.

24. Committee for Economic Development. *Building a National Health Care System*, New York, 1974, p,. 66.

25. Business Roundtable, *Washington Health Organization Conference on Health Care Legislation*, June 20 1974, Washington, D.C. pp. 3-4.

26. Commonwealth Fund, which has long been active in health: Rockefeller Brothers Foundation, Andrew Mellon Foundation, as well as New York Life insurance company, Johnson and Johnson Company and medical supply firm and CIBA-Geigy Company and Upjohn Company, both drug manufacturers.

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28. Seymour Lustermann (ed.). *Health Care Issues for Industry*. (N.Y. Conference Board, 1974) p.l.

29. Walter A Hamilton, "Conference Aims" in *Ibid* p. 10.

30. Paul M. Ellwood. Jr , "Business and the Changing Health Care Scene." in *Ibid.*, p. 54.

31. U. S. Department of Health, Education and Welfare, *Towards a Comprehensive Health Policy for the 1970s: A White Paper* (Washington, D.C. U.S. Government Printing Office, 1971).

32. See Paul M. Ellwood, et al, "Health Maintenance Strategy" *Medical Care* May-June, 1971, p. 291, Paul M. Ellwood. "Implications of Recent Health Legislation" *American Journal of Public Health* January 1972, p. 20. Paul M Ellwood, "Health Maintenance Organizations: Concept and Strategy," *Journal of American Hospital Association* 45:6 1971., pp. 53-55 Paul M. Ellwood "Big Business Blows the Whistle on Medical Care Costs" *Prism*. December 1974, pp. 13-15; Paul M. Ellwood, "Models for Organizing Health Services and Implications of Legislative Proposals" *Mibank Memorial Fund Quarterly* October 1972, among numerous others.

33. Paul M. Ellwood and Michael Herbert, "Health Care: Should Industry Buy It or Sell It?" *Harvard Business Review* July-August 1973, pp. 99-107

4. Richard Nixon "Building a National Health Strategy: Special Message to Congress." Washington D C. February 18, 1971

35. "Spur 'Superclinics' Expansion to National Scale Ellwood Urges" *Medical Group News* 8:1. March 1976.

For a thorough assessment, see David Gaynor, et al. "Implications of Corporate Involvement in HMOs. HMOs in Historical Perspective" unpublished paper. (Ithaca, New York Cornell University 1974).

36. See ref. 13. For a thorough assessment, see David Gaynor, et al, "Implications of Corporate Involvement in HMOs,HMO in Historical Perspective" unpublished paper. (Ithaca, New York Cornell University 1974)

37. U. S. Department of Health Education and Welfare, Forward Plan For Health F Y 1978-82 (Washington, D.C. U.S. Government Printing Office. 1976). p. 50, and U. S. Department of Health, Education and welfare. *Health Maintenance Organizations. Survey of F. Y. 1975 Annual Report*. DHEW Publication No. (HSA) 76-13036.

38. "R.J. Reynolds to Open New HMO for Employees" *Health Services Information* April 2 , 1976, p. 6-7

39. Dean J. Warshaw, "The Expanding Scope of Occupational Medicine" *Journal of Occupationa Medicine* 17:10, October 1975, p. 624.

40. Miles Colwell, "The Balance Sheet in Employee Health Conservation," presentation to Annual Meeting of the Industrial Health Foundation, October 13, 1970.

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(Contd. on page 51)

ILLS OF THE HEALTH INDUSTRY

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"Corporate Crime in the Pharmaceutical Industry" By John Braithwaite Routledge & Kegan Paul, London 1984, £ 25.00

Illicit drug networks, contraband smuggling and terrorist gangs constitute popular international crime syndicates against which most countries have evolved elaborate and sophisticated means of counter. Transnational Corporations (TNCs) also operate an equally organised crime syndicate but to which invariably the states' regulatory and enforcement machinery look the other way or are deliberately kept as inadequate.

Pharmaceutical TNCs are probably the worst of their kind. The pharmaceutical industry forms the nucleus of the health industry. It determines the nature of the health industry and controls the latter completely. Pharmaceutical firms play a central role in health (as well as general) policy making and planning, education of doctors and other health personnel, and of course socialisation of consumers into a ' pill-popping" culture.

Pharmaceutical business is essentially transnational and therefore, its crimes acquire an even more serious concern, especially because there is a gross inadequacy of protection against the ills of the health industry. For instance even in the USA, where the consumer movement is probably the strongest in the world, marketing a drug with dangerous side effects is not even an offence unless the product is actually banned or there has been criminal negligence.

Dr. John Braithwaite in *Corporate Crime in the Pharmaceutical Industry* cites innumerable cases revealing that the transnational pharmaceutical industry has a worse record of international bribery and corruption than any other industry, a history of fraud in the safety testing of drugs, a disturbing record of criminal negligence in the unsafe manufacture of drugs, of unethical practices in pushing drug sales including smuggling and of global law evasion and financial fiddling whose worst victims are third world countries.

Unlike the times and crimes of Hitler, the brutalities of today's leading pharmaceutical corporations have yet to find a prominent place in world history. Many authors have documented in horrifying details the brutalities of the drug TNCs that have built up an industrial empire through inhuman criminal undertakings.

For example, Germany's I. G. Farben (today divided into Hoechst, BASF and Bayer) which operated a massive chemical plant at Auschwitz with slave labour of 300,000 concentration camp workers, tested drugs on a large number of workers who died in the drug-testing programme. The following extract from letters written to the camp at Auschwitz by I. G. Farben indicates the grave nature of the criminal offences indulged in by the pharmaceutical companies to multiply their profits :

"In contemplation of experiments with a new soporofic drug, we would appreciate your procuring for us a number of women . . . - we received your answer but consider the price of 200 marks a woman excessive. We propose to pay not more than 170 marks a head. If agreeable we will take possession of the women. We need approximately 150 . . . . . Received the order of 150 women. Despite their emaciated condition, they were found satisfactory. We shall keep you posted on developments concerning this experiment . . . . The tests were made. All subjects died. We shall contact you shortly on the subject of a new load."

Today Hoechst and Bayer are the largest and third largest drug companies in the world. They made capital through incriminating means; they were criminals and twelve of their top executives were sentenced to terms of imprisonment, for slavery and mistreatment offences at the Nuremberg war crime trials. (It must be noted, not for corporate crimes in which allied forces were equally involved). But once allied control loosened two of the criminals, Friedrich Jaehne and Fitz ter Meer, were appointed chairmen of Hoechst and Bayer, respectively.

Braithwaite introduces his book on Corporate Crime with this horror story and subsequently moves on to expose the various areas and mechanics of crime in the pharmaceutical industry with interesting but emotionally disturbing case-studies.

The Pharmaceutic Global Empire

The foundation for the transnational nature of the drug industry was laid sometime at the turn of

the century but only consolidating itself in the inter-war period. The modus operandi was invariably international traffic in illicit drugs. Bayer, at the turn of the century, used the same mass marketting tactics for heroin as it uses for aspirin or Baygon, the cockroach killer. Bayer even promoted heroin as a panacea for infant respiratory ailments ! Parke Davis similarly promoted with great enthusiasm the therapeutic virtues of cocaine, marketing it as coca-cordial, cocaine cigarettes, hypodermic capsules, ointments and sprays. Roche was heavily involved in the supply of morphine to the underworld and the Canton Road smuggling case — Shanghai, 1925 — revealed extensive involvement of Hoffman-La Roche in the illegal drug trade.

Thus "some of the great pharmaceutical companies of today owe their existence to profits from the trade in heroin and morphine in an era which laid the foundations for the self-perpetuating cycles of addiction to these drugs in modern societies. The next generation might look back on the activities of Hoffman-La Roche in pushing Valium and Librium with disgust equal to that we feel today towards their heroin sales between the wars".

The entire pharmaceutical industry is virtually controlled and dominated by private firms from four countries — USA accounting for 34 percent of world production, Japan 20 percent, and West Germany 13 percent, Switzerland 10 percent, Hundred pharmaceutical firms out of an estimated ten-thousand in the world account for 90 percent of world shipments of drugs; out of these the top 25 TNC's (half of them from USA) account for 50 percent of this sales (UNCTC, 1979).

In 1980, out of the 83530 million dollars production of drugs the developed countries (including East Europe) accounted for 88.5 percent and the developing countries only 11.5 percent (UNIDO, 1980). And within the developing countries India, Egypt, Brazil, Argentina and Mexico accounted for two-thirds of the drug production (UNCTC, 1979). As regards drug consumption the developed world consumes 80 percent and the developing world (including China) 20 percent of the world production (UNIDO, 1980) - an awesome irony when the population ratio is just the other way around. To quote Halfdan Mahler, "the public health services of the 67 poorest developing countries, excluding China, spend less in total than the rich countries spend on tranquilisers" (Mahler, 1981).

On an average drug consumption in some of the poorest countries works out to less than 50 pence per capita, whereas in some industrialised nations it is 35 pounds per capita (Faltorusso, 1981). These figures underline the lack of purchasing power of the third world poor. Essentially, they reveal more about wealth than health. It is, for example, highly debatable whether the level of drug consumption in much of the rich world represents a particularly 'healthy' state of affairs. But one conclusion is inescapable : whereas rich countries can afford to be extravagant with medicines without risking acute social consequences, poor people and their governments cannot. Because they have so little money, it is crucial that it is spent only on essential drugs (Melrose, 1982). Ironically, even the "little money" in the third world is largely spent on drugs which are not necessary at all — this is because of the overwhelming control of drug production and trade in these countries by the TNC's.

Thus as a consequence of this global oligopolistic control and domination (even in free enterprise USA 20 firms account for 80 percent of all drug sales) the pharmaceutical industry has established a position through which any amount of abuse may be hurled at the people without any adverse consequences to the former.

Braithwaite's book consolidates most of the earlier work since the early sixties and puts it together into a comprehensive whole. He also draws a great deal from the US Security and Exchange Commission (SEC) files and rounds it off with 131 interviews with executives of 32 TNC's in five countries. Braithwaite covers a whole range of crimes from simple payoffs and kickbacks for hastening administrative procedures to criminal practices in drug-testing and manufacture, from financial fiddling and oligopolistic practices to malpractices in drug pushing, and from smuggling and international law evasion to abuse of the third world nations.

This survey of pharmaceutical criminal undertakings is adequately supported by a wide range of case-studies from most of the prominent drug TNC's. Here is an overview of the crimes and a few of the case-studies recorded in the book.

Bribery

Bribery is considered as normal and acceptable business practice. "Almost every type of person

who can affect the interests of the industry has been the subject of bribes by pharmaceutical companies : doctors, hospital administrators, cabinet ministers, health inspectors, customs officers, tax assesors, drug registration officials, factory inspectors, pricing officials and political parties".

Braithwaite, after a thorough search of SEC files, lists 29 US pharmaceutical firms that have disclosed substantial amounts of questionable payments. No other industry, he adds, has anything approaching this record of *documented* corrupt payments, sustaining the conclusion that the pharmaceutical industry is more prone to bribery than any other international business. Possibly this is because like aerospace, arms, petroleum and other heavy capital goods industry, pharmaceutical firms deal with big win or lose situations — the new billion dollar product to be approved or the multi-million dollar supply contract to a third world government. Passing of a plain envelope of currency notes under the table is not the only method of bribing. In fact, most often more sophisticated methods are used. Braithwaite points out for instance, that if the secretary of a hospital board owns an architectural firm, a law firm, or a public relations firm, then you can hire his/her firm, perhaps even get some genuine services from it, but pay extravagantly for such services. You can even rent a property from the person concerned at an unusually remunerative rental. The pharmaceutical disclosures show that paying on an invoice to the company for services not actually rendered, or overinvoicing by the company so that an excess can be put aside for the recipient of the bribe have been the most commonly reported practices in the pharmaceutical industry. What is most interesting is that most questionable payments are treated as tax deductible expenditures which means a substantial loss to the state exchequer. For instance Merck, which reported 3.6 million dollars as qestionable payments in 39 foreign countries claimed tax deductions and after the disclosure agreed to pay the US Internal Revenue Service additional tax of 264000 dollars. Similarly Warner-Lambert had an additional tax liability of 325839 dollars.

Corruption often reaches highest levels of government as in the following incident reported in the New York Times : In Italy a dozen manufacturers, including some American companies, once banded together to back an industry sponsored bill in the Italian Parliament that would have allowed manufacturers to sell their non-prescription products in supermarkets and other retail outlets. There, they would no longer be subject to price control. One million dollars (80,000 dollars per company) were paid into a war-chest of the ruling Christian Democratic Party.

There is an even more interesting case involving Hoffman-La Roche, who bribed two Kenya government pharmaceutical buyers for favouring their products. *The two health officials were convicted and imprisoned and it was revealed that they had brought quantities of an anti-bacterial and a tranquiliser from Roche that would last the nation for a decade—not a healthy situation with products having a shelf-life of only couple of years.*

What has been done to curtail the menace of bribery ? Nothing of consequence is Braithwaite's conclusion. He cites the instance in Mexico when Portillo came to power. Eight top executives of pharmaceutical TNCs were arrested and jailed; also a number of senior government officials were dismissed. This raid was in reality aimed at launching a moralising campaign to turn into reality the aims set forth by the new government of the republic at Inauguration Day, as also to remove officials who would be a problem to the new government. Of course, after a few days the defendants were released on a bail of one million pesos each and some months later even the charges were dropped ! But such dramatic gestures cannot be sustained for long because once the international business community recoils from the shock and regroups, it is a worthy adversary to the state in instiutional power. Similarly in the USA the SEC disclosures have been firing blanks : who gets hurt in consent settlements ? The SEC gets a notch in its gun. The law firm gets money, the public is happy because they read 'fraud' in the newspaper and think criminality right away. The company neither admits or denies anything. Its the perfect accomodation. And its all one big charade.

Drug Testing

Bribery as a crime seems inconsequential when one looks into the fraudulent practices in safety testing of drugs and unsafe manufacturing practices of the pharmaceutical industry. The crimes in these two sectors have caused irrevocable human damage. At one end there is gross manipulation and cheating in drug research and on the other end cutting corners on product quality in the manufacturing process.

Morton Mintz's exposure of the frauds of the drug industry was a pioneering effort and set in an

era of greater vigilance towards illness-business. In 1962 the FDA made multiple seizures of Regimen tablets (phenylpropanolamine hydrochloride), marketed by the Drug Research Corporation as a 'reducing pill', on charges of misbranding. In depositions by two doctors who had 'tested' the drug it was revealed that the results were complete fabrications. For instance one doctor reported that her report was untrue in its entirely—57 of her 75 patients' charts were complete fabrications and of the remainder only the patients' initials and starting weights were correct ! (Mintz, 1967).

Two investigators in drug testing Dr. Bennett Robin, who had tested 45 products for 22 reputable pharmaceutical companies and Dr. Leo Cass, director of Havard Law School Health Services, who had undertaken 84 research projects for testing and 25 projects for product marketing applications were identified for scrutiny by the FDA. It was revealed that a substantial proportion of the 'testing' was *'graphited'*, that is, by invention of pencil, rather than by actual testing. The FDA revealed that many of the patients on whom 'tests' were done had been deceased earlier or were never hospitalised and treated. Also, for those who were treated the statements made, including claims that treated patients had certain medical conditions, were untrue. This was in the early sixties.

Even in the late 'seventies, after substantial tightening of regulations and monitoring by FDA, graphiting and distortion of results in drug testing were rampant. Between 1977 and 1980 FDA discovered at least 62 doctors who had submitted, manipulated or downright falsified clinical data. Add to this the fact that most fraud in clinical trials is unlikely to even be detected; most cases which come to public attention only do so because of extraordinary carelessness by the criminal physician.

The 1978 hearings of the Kennedy Sub-Committee on Health has catalogued a list of abuses which are still of major concern : (1) Case reports on fictitious subjects, and on subjects who were never administered the investigational drug; (2) Case reports containing the results of clinical laboratory work which was not actually performed; (3) False representation of Institutional Review Board approval of a study; (4) Misrepresentation of patient dagnosis and demographic data; (5) Consent (informed consent) of the clinical subject not obtained; (6) Drug doses given, farexceeding protocol limitations. (7) Drugs given to inappropriate subjects (especially pregnant women); (8) Serial use of investigational drugs to the exclusion of accepted therapy; (9) Administration to subjects of two or more investigational drugs at the same time and the administration of other significant and perhaps interfering drugs with the investigational drug ; (10) Inadequate medical attention to the test population through excessive delegation of authority, lack of follow-up; and (11) Representation of investigational drugs as marketed products and/or the sale of such drugs.

This (researcher dishonesty) is indeed an alarming situation but worse still is the situation in third world countries where consumer protection is almost totally absent. Drug companies opt to test particularly dangerous drugs in the third world because poor people are regarded as more dispensable, and in some measure this is undoubtedly true, concludes Braithwaite. But there are also other more practical reasons for going to the third world first with drugs for which fears of side-effects are great. *Peasants do no not sue global corporations for injury. Informed consent regulations for drug testing do not exist in the third world.* Moreover, given that the patent life of a new discovery is finite, and that monopoly profits will only accrue while the patent lives, there are incentives for companies to get a product registered wherever they can as early as they can. And if the product is found to be unsafe by subsequent, more sophisticated, testing in a developed country, then at least the company has made some money in the third world while the going was good.

Unsafe Manufacturing Practices

Pharmaceutical transnationals have a high reputation, especially in the third world, as regards their product quality and manufacturing practices. But Braithwaite cites a number of cases even within developed countries to prove that this is not wholly true. Yes, it is a fact that manufacturing practices of TNCs are relatively superior to those of other industries but in the third world their standards are very lax in part due to lack of well-defined standard codes in most of the third world.

Many countries have legislations pertaining to quality control such as Good Manufacturing Practices (GMP), Good Laboratory Practices (GLP) and Standard Operating Procedures (SOPs) but the legislations provide adequate loopholes, and monitoring and control is a fairly difficult process and therefore a very constraining task for the state

whose resources are limited. And as one quality control manager put it 'government inspectors ensure the quality of your records, not the quality of your deeds'.

However, there is no doubt that the worst quality standards are in the third world countries where due to limited resources short-cuts are invariably adopted. In the drug industry cutting corners on quality can have very serious consequences for consumers and therefore "bath-tub" manufacturing which is extensively prevalent in the third world, needs greater regulation. In fact, in many third world countries TNCs try to push up quality control - GMP and SOP - Standards because for manufacturers in the third world high quality means cost constraint, which in turn pushes up market prices and in a poor country high priced products could mean loss in market share. Higher quality standards puts the TNCs, who have virtual monopoly of high quality technology, in a domineering position, as well as assures them of a relatively competition-free market.

Drug Peddling

Most countries have restrictions about what claims are made about the products efficacy and use as well as regulations pertaining to Indications about side-effects about the drugs, and its contra-indications. However, as in the case of other areas the scope of malpractice in advertising is also greater in the third world revealing once more the double standards of the drug TNCs. The cost of promotion and consequences of criminal malpractices therein are ultimately borne by consumers. The UNCTC (1979) indicates that approximately 20 percent of all drug sales at the manufacturer's level goes for promotion. In the US the drug industry is easily at the top of league of the heaviest advertisers, with the soap and detergent industry its only close rival; even tobacco, alcohol, food and soft drinks lag well behind (Haslemere Group).

In the third world the expenditure is estimated to be even higher. In Columbia the money spent each year by foreign companies on marketing their drugs adds up to more than half the country's national health budget (Braun, 1980). The Concentration of sales representatives to doctors in the third world is much greater than in developed countries. In Britain, there is one medical representative for 18 doctors, whereas in Bangladesh the ratio is 1:7; in Tanzania 1:4; in Nepal, Brazil and Central American countries 1:3 (Melrose, 1982).

The Kennedy Senate hearings have documented gifts to doctors of freezers, tape recorders, stethoscopes, golf balls with Pfizer stamped on them; indeed, almost every type of consumer product imaginable. Further, in 1973, 20 drug companies in the USA gave 12.8 million gifts to members of health care profession and over two billion samples of free drugs. Drugs companies have provided free to 80,000 doctors in 35 cities F M radio sets tuned to the Physicians Radio Network that constantly churns out medical news and features of interest to physicians.

The major consequence of such heavy promotion of drugs is that where people have access to drugs there occurs a substantial amount of over-medication, especially of the non-prescription drugs that 'ease our ailing heads, noses, chests and bowels' giving us 'fast action and rapid relief'.

Oligopoly and Price Fixing

High profitability is the lifeline of the drug industry, contrary to what OPPI and IDMA would like us to believe. Since World War II pharmaceuticals has been the most profitable business. The UNCTC observes that from 1953 to 1967 in the US, the equity capital in drugs increased 584 Percent whereas for the entire manufacturing industry the increase was only 183 Percent in the same period. Most American companies have been recording on an average, net profit between 30 percent and 40 percent a year; SKF, Carter-Wallace, and Rohrer between 40 and 47 percent; Syntex, A.H. Robins and Marion Laboratories over 50 percent and Upjohn even during the depression between 1930-35 recorded an average of 30 percent.

Braithwaite rightly argues that excessive profits in the pharmaceutical industry arise in considerable measure from the peculiar features of the market which shelter producers from price competition. Consumer sovereignty is absent in the prescription drug market because it is not the consumer who makes a decision to purchase, but the physician. Doctors have no reason to be price-conscious. Moreover, the need for effective medical care is relatively price inelastic in affluent societies.

The Kefauver hearings before the US Senate Sub-Committee on Anti-trust and Monopoly (1977) found that the average production costs for 15 major drug firms were 32.3 percent of the wholesale price at which the manufacturers sold their product. Not one of the 50 companies compared

from other industries had production costs lower than the highest production costs among the 15 drug companies; only Coca-Cola came somewhere near with a production cost of 42.6 percent of ex-manufacturer sales.

Besides the drug market structure, the legal back-up of patent holding for 16-17 years makes the pharmaceutical industry oligopolistic. Patent-holding alongwith branding gives the pioneering company an advantage because the brand name becomes a habit and late-entrants to the market find it difficult to break the original brand's monopoly of the drug market. Thus the higher price of the brand-leader is no threat to its market share. As a result fortunes have been made because of patenting and branding, and quite often through direct oligopolistic deals as happened in the case of tetracycline, quoted at length by Braithwaite.

Pfizer and Cyanamid were dominating the broad spectrum antibiotics market till 1953 with their patents on chlorotetroncycline and oxytetracycline. This patent protection helped them maintain high prices and massive profits. But in 1953 when the therapeutically superior tetracycline came on to the scene their profits were threatened. Both the firms wished to avoid this competitive market structure and therefore manoeuvred a deal that managed to restrict tetracycline sales to five firms-Pfizer, Cyanamid, Bristol, Squibb and Upjohn — all of whom recognised Pfizer as the patent holder.

Thus price-fixing was inevitable. Keauver's investigations revealed a conspiracy that was in violation of the Anti-trust law of USA (The first charge was made in 1958 by the Federal Trade Commission). A long drawn out legal battle began which acquired an international dimension (including India). The various civil cases are still going on but criminal charges have been inconclusive. So far damage worth 250 million dollars have been paid by companies -- the US government itself is claiming overcharges of 376.5 million dollars.

However such price-fixing conspiracies are not possible today because all governments (USA being the only exception) have a price control policy. Of course, this is no guarantee that the pharmaceutical TNC's will not club together to influence what to their understanding is a fair price. Oligopoly has become the basic operating principle in the pharmaceutical industry. The most classic instance, ironically, being free enterprise USA itself. Inspite of the Anti-trust Law five massive mergers of pharmaceutical TNC's have taken place in the last decade or so: Mead Johnson and Bristol Myers; Plough and Schering; Ciba and Geigy; Parke Davis and Warner-Lambert; Dow and Richardson-Merrell.

Then, as the markets and courts have failed to regulate pharmaceutical prices effectively, and since self-regulation of pricing would be to put Dracula in charge of the blood bank, the only course, argues Braithwaite, is for greater political administrative price control.

Financial Fiddling

Financial abuse is an area of crime that probably has the worst consequences for the third world nations. Other areas of crime discussed earlier affect health of consumers directly as individuals or may be even as a class but financial fiddling can cause irreparable damage to a third world nations' economy.

For instance, a large proportion of transaction on the books of an international company, writes Braithwaite, are sales from parent to subsidiary, subsidiary to parent, or one subsidiary to another. Intracompany *transfer prices* can effectively shift profits from one part of the world to another. For example, drugs might be shipped from a high-tax country to a low-tax country at below market prices in order to shift profits to where they will attract least tax. Transfer pricing is therefore a classic law evasion strategy. Tax laws of the high-tax country are not violated, they are evaded. In one celebrated case vitamins were manufactured in France at a cost of Fr. 50 per kilo, exported to West Germany, from there sent to Switzerland, thence Monaco, and eventually reimported to France at Fr. 250 per kilo under a different trade name. It sometimes happens with such cases (especially in the third word) that shunting around the circuit happens only on paper without the corresponding physical movement of materials.

The most important tax heaven in the pharmaceutical industry is Puerto Rico. A large proportion of transactions between the USA and other parts of the world, comments Braithwaite, go through Puerto Rico. Wall street analyst John Buttles II calculates that Warner-Lambert had a 110 percent return on its investment in Puerto Rico plant and equipment in 1976. For Abbot the figure was 101 percent while for Schering it was a meagre 90 percent. In 1977, Schering recorded 59.2 percent of its world-wide profits in Puerto Rico; Squibb 53·7

percent; Abbot 48.4 percent; Smithkline 45.7 percent. But Searle outdid everyone: while Searle's worldwide operations in 1976 and 1977 ran at a loss (at least were shown as so) its Puerto Rico subsidiary recorded over 100 percent of its worldwide profits.

A study of third world countries shows that pharmaceutical imports into Columbia by foreign owned companies were overpriced by 155 percent, very much higher than the overpricing of other imports. Vaitsos estimates that if Columbia had been paying average world prices for its pharmaceutical imports, the country would have saved a charge of 20 million dollers to the Columbian balance of payment in 1968. Approximately half of 20 million dollars in excess profits repatriated by transfer pricing would have gone to the Columbian government in taxes (Vaitsos, 1974).

Besides fiddling books, repatriation of profits from third world countries can be achieved by fiddling packages. A European transnational was found to be importing into South America sealed packages of drugs which contained less than 30 percent of the declared contents. By paying 100 percent of the declared cost to the patent company (through a tax haven) the subsidiary was able to transfer 300 percent increased profits to the parent.

There are many reasons apart from evading tax, indicates Braithwaite, for a parent to charge high prices for intracompany sales to an affiliate, and low prices for sales from affiliate to parent. It might be done to circumvent dividend repatriation restrictions, reduce the affiliate's exposure to currency devaluation and expropriation risks, lower apparent profits when excessive profits might encourage labour unions to escalate wage demands and local customers (and governments) to demand price reductions, or simply to allocate markets by making the exports of a subsidiary noncompetitive.

Thus, if the control and domination of the drug TNCs has to be broken, their abuse of human health eliminated and their crimes in the manufacture and marketing of health terminated, the fight necessarily must be a political one and not one of improving the market and legal situations as most countries are resorting to today. The TNC power is derived from their ability to control and manipulate political affairs of both developed and developing countries. Only a manifestation of power of an equal force can offest the drug TNC's choking hold over people's health and well being.

Case Studies

(1) Richardson-Merrell : In 1960, a subsidiary in the USA began the marketing of a blood-cholestrol reducing drug, MER/29 (triparanol). In its first 12 months 300,000 Americans used MER/29. Soon reports flooded the market about its side-effects - baldness, skin damage, changes in reproductive organs and blood and serious eye damage including cataracts. It was later revealed that the drug had problems in the testing stage. On grounds of integrity, Mrs. Benhah Jordan had quit Merrell. There was gross manipulation of data in the animal testing (monkeys) programme and gross misreporting of facts to FDA, inspite of the fact that comparative studies by Merck and Upjohn had reported severe side effects. Even in the human testing stage doctors reported severe side-effects but Merrell chose to ignore them and fabricated the data for FDA approval. It was also revealed that the supervisor on the project. 'Dr' William King had not yet been awarded his medical degree! In the criminal case that followed the defendants pleaded 'no contest' and after six month's probation and a paltry fine (dollars 80,000) the three exceutives were let free. In civil suits that followed Richardson-Merrell paid 200 million dollars, mostly in out-of-court settlements.

(2) Dawes Laboratories : In 1971, many workers complained of sexual impotence — some men had developed enlarged breasts, in one case requiring surgical removal. Plant conditions were bad - ventilation was practically non-existent and the whole interior of the plant was covered with dust containing as high as 10 percent DES (a hormonal product) by weight. An enquiry by OSHA resulted in a fine of only 21000 dollars.

(3) Hoffman-La Roche : In a patent hearing in Canada it was revealed that the wholesale price of Valium is 25 times that of gold. It costs dollars 87 per kilo for the raw matrial for Valium (diazepam). To put the raw material into final dosage form and to label and package the tablets brings the cost upto dollers 487 (high estimate). The final retail price is dollars 11000 for that same original kilo which has now produced 100000 ten milligram tablets. The selling price is 140 times the original cost of materials and twenty times the total production cost. Roche sales of Valium in the USA alone in 1972 was worth 200 million dollars. Roche sells Valium in Germany at four times its price in Britain (both belong to EEC). In Sri Lanka Valium was quoted by Roche to the government as 70 times the price charged by an Indian company.

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TRAGEDIES AND TRIUMPHS

Health and Medicine in Bhopal

padma prakash

March 23, 1985 : A premature baby, born two months too early died at the hospital at the DIG bungalow after a nine-hour unequal struggle to live. The mother was a gas victim and had brought the baby to the hospital five hours after its delivery by a dai. The child had been put on oxygen. The baby and the mother lay uncared for on the floor of the ward until 8 p.m. when a visiting pedaetrician just happened to look in on the doctor-in-charge. He was directed to the child. By then it was too late. No attempt had been made to clear mucous from nose and throat of the child and although the suction apparatus, dusty and rusted, did work, the hospital had no stock of small-sized catheters. The heart had stopped, the hosptial had only coramine which of course, was of no use. The child was declared dead and a certificate was issued. There was no post-mortem although it was actually a gas-related death. The mother had attended the ante-natal clinic of the hospital three weeks before and had been given an injection — presumably TT, but had not been given any advice about her pregnancy or the necessity of a hospital delivery especially if premature.

March 24, 1985 : A seminar on Pulmonary Medicine was organised at the Gandhi Medical College, (GMC) Bhopal. The afternoon session was on effect of MIC on the lungs. There were several eminent speakers — Dr. S R. Kamat of the K. E. M. Hospital, Bombay rapidly projected innumerable slides and summarised his findings on treating 113 gas-hit patients who had been admitted to the hospital. Prof. Heeresh Chandra, head of the Forensic department of GMC talked of autopsy findings screening slides which even his colleagues at the college had not been allowed to see until then. His findings, he said, pointed to cyanide poisoning and vehemently advocated detoxification with Sodium Thiosulphate (NaTS). Dr. N. P. Mishra peppered his presentation with long quotes from medical researchers from UK and USA to whom he had written. He declared that the gas victims had died of carbon monoxide poisoning. His own trials with NaTS showed that it caused a reaction— two out of 200 patients developed gastrointestinal symptoms and rashes — and so he was opposed to NaTS. There were many others — all of them taking great pains not to reveal the full details of their studies. In the discussion that followed everyone seemed to forget that the focus here was not a scientific thesis but the future and death of lakhs of people.

Sitting in that lecture hall one could easily forget the larger theatre of disaster across the city. These two events illustrate the emerging situation in Bhopal. In the gas-hit bastis the nightmare of December 3rd continues to haunt the people — their health is deteriorating, state-run medical relief is almost at a standstill, equipment is inadequate, information supplied is nil, doctors are uncaring and in any case, no medicines help. In the hallowed halls of medical and scientific institutions researchers are engrossed in intricate debates to prove their favourite hypothesis quite losing track of immediate concerns. The macroworld of two lakh suffering people has been reduced to the microcosm hundred of odd hospital patients in the 'MIC wards'. Typically the medical profession has transformed the stupendous medico-social situation into a laboratory-based clinical/medical problem.

Reviewed here is the health picture in gas-hit Bhopal as it has developed during these months and the manner in which the medical community has responded to it.

The Black days

The Bhopal disaster has been called the world's worst industrial disaster, and with reason. The number of dead mounted in terrifying proportions — 350 by the end of December 3, 500 by the 4th, over 1600 by the 5th December. One week after the disaster a conservative estimate put the death toll at 2,500. Unofficial estimates put the numbers closer to 6,000. But the exact numbers will probably never be known.

By the end of the third day over 20,000 people were being treated in the city's seven hospitals. They came with complaints of burning eyes, lacrimation, cough, breathlessness, nausea and dizziness.

That first day alone saw over 10,000 patients in one hospital showing signs of eye damage.

Bhopal's 350-400 doctors worked round-the-clock at numerous centres — make-shift tents, medical aid posts and the wards. Hospitals ran out of medicine and had to buy out stocks from the city's shops, oxygen had to be obtained from other cities. A hundred more doctors were brought in from the near-by towns.

For a time no one knew for certain what the killer gas was. Some said that it was methyl isocynate, others phosgene. None of the doctors knew how to treat the victims.

It is now known that the Union Carbide (UC) knew of the results of six animal studies initiated by the company which provided enuogh evidence of the chemical's high toxicity. (Three of these listed in the Box) Moreover the Occupational Health Guidelines for MIC states clearly that MIC might well decompose into hydrogen cyanide, oxides of nitrogen and carbon monoxide at high temperatures (of over 200°C). UC's own standard line of treatment prescribes intravenous hydrocortisone, oxygen inhalation and if cyanide poisoning is suspected then amyl nitrite. If there is no effect, sodium nitrite and NaTS are to be administered. Yet, in the first week when Bhopal's doctors desperately needed information to save lives UC held back vital information.

Many of the doctors of Hamidia were on the Carbide plant's medical panel. Also UCIL had been giving generous funds to the hospital and GMC and had set up a respiratory research unit and ward. This indicates a close enough association between at least some of the hospital doctors and the plant's medical personnel. It is curious that the former did not know of the standard line of treatment for such 'accidents' which had apparently been long established at UC.

By all accounts the efforts put in by hundreds of people — the doctors, nurses and medical students, the army, the police, the NSS and the NCC volunteers and voluntary groups — in that first week was of heroic dimensions. (Many of them later suffered from delayed exposure to MIC). But the government machinery took time to dissociate itself from the electioneering, recover from the shock and coordinate relief measures.

Operation Cover-up

By December 6th it was, as one writer put it, 'back to business' for government doctors and others. Private doctors and nursing homes were also minting money and death and medical certificates were being sold at thousands of rupees. Hordes of experts began to arrive in Bhopal and everyone who was anyone began to make statements about the consequences of exposure to the gas. Speculation about the real nature of the gas ran rife. And the government put an embargo on information. Even the death toll was not revealed on the grounds that 'it was not advisable in public interest'.

Autopsies were performed from the third day but reports were not released. They showed fluid-filled lungs two-to-three times heavier than normal, ulcerative changes, cherry red appearance of organs, arterialisation of blood .. ... To Dr. Heeresh Chandra the autopsy surgeon, they indicated cyanide poisoning.

Even as experts in the government and outside it glibly began to assure people that there would be no after-effects, many people who had earlier been treated and discharged began to come to hospitals with new symptoms — shivering, yellow appearance, dryness of mouth, vomiting, nausea, stomach ache, diarrhoea, skin irritation and headaches and more seriously, conditions like cerebral palsy indicating the involvement of the central nervous system. More than 1,000 patients were on the critically ill list and at least 50,000 had serious eye problems. Some estimated that at least 500 of them would go blind but others like Dr. N. R. Bhandari, the superintendent of Hamidia Hospital said that there was no cause for anxiety and that the blurring of vision was due to the administration of atropine. "The worst is over" he stated and ruled out the possibility of the gas affecting the brain. Dr. M. N. Nagu, Madhya Pradesh's director of health services said that there might be ulceration and appealed for eye donations so that corneal grafting facilities could be offerred.

Scientists from UC's Research and Development centre stated that the gas would be excreted from the body in due course and only bronchodilators were necessary. Scientists at the Industrial Toxicological Research Centre (ITRC) Lucknow opined on the basis of their study of literature that there would be no further damage because of the gas. And agricultural scientists were reassuring people that there was no environmental damage and cautioning them to only make sure that vegetables were washed, water and milk boiled before consumption.

With thousands still suffering from debilitating symptoms the only treatment being meted continued to be symptomatic — eye drops, antibiotics and corticosteroids. Interestingly, the WHO toxicologists approved of the then current of treatment and insisted that there was no known antidote for cyanate poisoning. Two lone voices were heard to assert that there was antidote which seemed to be effective — NaTS. One of these supporters of NaTS therapy was Dr. Max Donerer, a German toxicologist who had arrived in Bhopal with ampoules of NaTS and had started using it. The other was Dr. Heeresh Chandra who on the basis of his autopsy findings believed that NaTS would be effective and had taken it himself. When two patients who had been given NaTS died, the German was quietly packed off. NaTS therapy was discontinued much to the relief of UC's Dr. Loya and his supporters Dr. Mishra and Dr. Bhandari Dr. Chandra was methodically isolated and ignored. Why was NaTS therapy discarded so precipitously? The deaths it appeared, were merely excuses, because the real cause was never investigated. Also curious is the fact that no one seemed to have questioned why the second telex from Union Carbide reversed the advice given in the first to administer NaTS. One of the arguments against using NaTS was that although there was evidence that people who had been administered NaTS seemed to recover, there was no 'proof' that it worked! The history of medicine has seen any number of situations when a therapy which has been found to be effective has been used because it is needed and only years later has the mechanism of its action in the body been worked out. The tragedy of Bhopal is that it is now acknowledged that thousands of lives could possibly have been saved if detoxification with NaTS had been undertaken in those first days.

By the end of the first week operation cover up was well on its way. The panic-stricken state government seemed more concerned about absolving itself of any responsibility for the disaster than about helping the victims. What is most shocking is that a section of the medical community collaborated with the government in keeping medical information under wraps. There was deliberate falsification of records, x-ray and pathological reports were refused to patients, autopsy reports were not given to those concerned. In normal times such a gross disregard for ethical practice would have been soundly condemned. But in Bhopal it was and is justified as being in the interest of controlling public panic and anxiety.

Expert vs Expert : While people suffer

A full eight weeks after the disaster the deleterious effects of the gas were still evident. New signs and symptoms were appearing — damage to the liver, kidneys, gabrahat, anxiety, depression, loss of memory, confusion and lack of co-ordination deafness and impotency. By the end of the second week there had been 800 doctors working in Bhopal's 64 round-the-clock medical centres. But two months after the disaster most of the state-run operations were winding down. Mobile hospitals were still plying but people had generally realised the ineffectiveness of medicines. Many had turned vendors of antibiotics, antacids and vitamins. At no time had any attempt been made by the government agencies to give medical and health information to the public. People were distraught and confused. Controversies abounded and the situation was made worse by the cloak of secrecy.

Earlier the team sent by the Royal Commonwealth Society for the Blind had asserted that no permanent damage or blindness was likely to result. American opthalmologists were of the opinion that opacities were highly likely to develop in the centres of the corneas thus affecting sight.

The ITRC team reported that the delayed effects and neurological symptoms perhaps indicated the presence of phosgene as well. They also reported that pulmonary fibrosis was a possibility in the survivors. American experts saw clinical evidence of diffused lung damage. Others denied that there could be any permanent damage — they attributed the high incidence of lung complications to the previously existing high rates of tuberculosis and other chronic lung problems. In Bombay Dr. S.R. Kamat was reported to have found evidence of permanent pulmonary damage, of changes in haemoglobin and neurological damage in gas-affected patients at the K.E.M. Hospital there. These patients were put on levamesol (so far used as an anti-helminthic) and the results were said to be promising. But the full report is yet to be published or presented.

Around this time another controversy which had been brewing for some time erupted. And it reads like a horror story. Since the second week there had been reports of stillbirths and abortions among the affected pregnant women. Some Hamidia doctors had reported finding traces of phosgene in the aborted foetuses. Abortions in gas-hit animals had also been recorded. Defence Ministry sources were quoted as saying that MIC was known to cause

damage to the foetus. Although the Sultania Zenana hospital had set up a special antenatal unit, most of the distressed and anxious women were turned away with assurance that the babies were safe. A survey in February / March of 1,900 households showed 100 cases of abortions and 22 stillbirths. Neither the government nor the medical pundits were willing to concede that there just might be some danger to the foetus either directly because of the toxic gas or indirectly because of the mother's health conditions. Given the state of knowledge at that time all one could have done was to offer facilities for amniocentesis examination and ultra-sonography and abortion services to those who opted for it. This did not even necessitate a stand being taken on whether MIC affected the foetus or not. But the authorities consistently brushed away these suggestions made by activist and health groups. When the Medico Friend Circle fact-finding team report in February suggested such a course of action, the bigwigs of medicine came down heavily on it for causing 'unnecessary panic'. In February two members of the Medico Freind Circle conducted a clinic-based study of gynaecological problems among the affected women in two bastis. They found high rates of menstrual disturbances, non-specific white discharge and evidence of pelvic inflammatory diseases. Up until then these conditions had neither been recorded nor reported. But again, no efforts have been made to set up special basti-based clinics or centres for women.

Medical Research in Bhopal

Not until January did the ICMR and other research agencies meet to work out the strategy for studying the impact of MIC. In the same month irked by the heavy atmosphere of secrecy leading newspapers had carried severe editorials criticising the ICMR's unwillingness to divulge relevant information. Perhaps as a result of this or because the lines of authority had now become clear, the ICMR released a first report on Bhopal. Unfortunately the report said little but listed out the various projects which had been approved. Surprisingly no comprehensive plan of research has been prepared nor priorities determined ! Research projects have apparently been sanctioned on ad hoc basis. Despite the Director General's earlier announcements there was no large-scale epidemiological survey listed. Earlier the MP government had instituted a detailed medico-social survey by the Tata Institute of Social Sciences in Bombay under strict surveillance and superivsion of the government authorities. For some unstated reason only a small portion of the survey was reported to have been completed, the rest being taken over by the government. And so there will never be a full-scale epidemiological survey of the consequences of the world's worst industrial disaster.

According to the ICMR's latest update, it has funded twenty projects with a total budget of over 156 lakhs. Only three of the projects are of less than two years duration. ICMR's ad hoc approach will certainly result in a series of research monographs years from now, but how much will it help the affected population ? In all likelihood they will never even hear about the results. The ICMR should have made it manadatory for all projects which dealt directly with the affected population to include a 'health education' component. If it had, we would not have the situation existing today of people being prodded, poked, examined x-rayed, and bleeded but never being given any information or advice about their health, their pregnancies. Bhopal's affected population is being treated by researchers as a set of guineapigs in a gigantic laboratory.

In the middle of February the ICMR finally released the results of its NaTS double-blind trial and issued a notification recommending NaTS to those in whose families death had occurred; those living within a radius of two km of the factory and those with specified symptoms such as nausea, tachycardia (high pulse rate), anorexia (lack of appetite) and so on. But the state government took no action on this until April when the ICMR issued a further set of guidelines. The centre could undoubtedly have acted to get the state to implement this decision. But it has conspicuously and distressingly kept out of the health scene in Bhopal.

There are some in the scientific and medical community who believe that debate on scientific and medical issues must be confined to the pages of scientific journals or seminars. The establishement's desire and its need for controlling information supports this archaic notion. In Bhopal this combined stand of the state and the professionals has had disastrous consequences for the people.

(Most of this material has been drawn from articles in newspapers and periodicals written by a number of people. Some of them are Kannan Srinivasan and Kalpana Sharma, Indian Express, Radhika Ramaseshan and Jyoti Punwani, Sunday Observer, Praful Bidwai, Times of India, Darryl D'monte, Illustrated Weekly and Arun Subramanyam, Business India. Other material utilised : ICMR's Update on Bhopal, Rani Bang and Mira Sadgopal's report of the study of gynaecological problems, MFC fact finding team's February report, ICMR's press releases and minutes of the February meeting.)

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If you would like to obtain copies of any of the above documents please write to us sending *0.50p per page, in advance.* If the number of pages exceeds 30 please add Rs. 5.00 postage (ordinary book post).

(For MFC fact finding team's February report and for information on its forthcoming report of the medico-social survey in Bhopal, write to Dr. Ravi Narayan, 326 V Main, I Block, Koramangala, Bangalore 560 034)

(Contd. from page 37)

In Britain, Roche was sued for abusing monopoly power by its pricing of Valium and Librium. In out-of-court negotiations in 1975 Roche agreed to pay 3.7 million dollars for over-pricing their product in the previous live years and also agreed to reduce the price at half the level of 1970. The importance of this case was that it focussed international attention on overpricing and anticartel suits followed in various countries.

(4) Upjohn and A. H. Robins : Upjohn's Depo-Provera, an injectable contraceptive for women, was found through early American research to be associated with such a welter of side-effects that the FDA has not only indicated that the product is not approvable in the US, but has forbidden human testing of the drug in the US. But huge quantities are being dumped on the third world. Throughout Central America one can walk into a pharmacy and purchase Depo Provera without a prescription. Earlier even most of the testing of the drug was done in third world countries like Brazil, Thailand, Chile, Philippines, Sri Lanka, Hong Kong, Egypt, Honduras, Peru, Mexico and Pakistan. "When research into its possible effect on the weight and blood pressure of women taking the injections was carried out in South Africa, the researchers saw fit to examine these features by experimenting with Negro (75 percent) and Asiatic (25 percent) women, rather than on women with the same coloured skin as the researchers".

Similarly A.H. Robins has dumped Dalkon Shields, an IUD, in some 40 third world countries. It was recalled from the American market after 17 women were killed. In an enquiry later it was revealed that in the teststage physicians had reported unfavourable effects like uterine perforation and ectopic pregnancies.

The staggering thing about the dumping in the third world in this case has been the involvement of the US government's office of Population with the AID. USAID purchased the contraceptive device at discount rates for assistance to developing countries after the product was banned in the US. Double standard for third world consumers were even more remarkable when Robins sold USAID unsterilised shields in bulk packages at a 48 percent discount. USAID justifies the discount Dalkon dump on the grounds of getting more contraception for the dollar.

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Why The Scope of SHR Should Be Confined to Health & Medicine

Anant Phadke and Dhruv Mankad

The sharp yet substantive comments on the first issue of SHR by Imrana Quadeer and Bharat Patankar/Jogen Sengupta (in "Dialogue" SHR 1.3) are welcome and raise hopes of SHR becoming a forum for debate also. We are responding to Imrana Quadeer's criticism to clarify and defend the standpoint taken by SHR to restrict the scope of SHR to discussion on Health and Medicine. At the same time we offer some critical comments on the material published in the first two issues.

Though we agree with many of Imrana's points of criticism and with her plea for greater analytical rigor, we want to point out that the errors she has pointed out do not flow from the decision of SHR to restrict itself to health and medicine. Her criticism on this point flows from her own confusion.

The dominant bourgeois ideology considers Health and Medicine as primarily technical issues; and if and when it considers social aspects, it glosses over, hides the role of the essential relations ("economic base") and the class struggle flowing from it. On the contrary in the first issue the Editorial Policy of SHR clearly states our standpoint that "From a marxist standpoint, health can be considered as a part and consequence of economic, political and socio-cultural development of society..." (three more sentences on similar lines). Any discussion on Health and Medicine within this perspective would necessarily be based on an understanding of society in general. Within the left, different individuals, organisations have differences in their understanding of the society in general and these differences would naturally reflect in their analysis of issues in Health and Medicine. A rigorous, correct understanding of Health and Medicine would not be possible with a superficial understanding of society and hence Quadeer is mistaken when she says that "It seems to me that a debate concentrating on health and medicine alone, however rigorous, tends to treat these general concepts superficially." If somebody disagress with a particular piece of analysis of Health published in SHR, one can show how that analysis is wrong by discussing that particular issue in Health and may also comment upon the basic understanding of the person being criticised but there is no point in having a debate in SHR on the nature of the Indian State, or of imperialism. Debating on concrete levels is not "an easy way out" as Quadeer thinks. Since a discussion on health and medicine within the left is relatively new, it is a more difficult path chosen by SHR compared to the option of publishing in SHR debates on general issues in Marxism. Let us illustrate our point by taking the same example of Amar Jesani/Padma Prakash's article

The main weakness of this article is not that it has focussed on "Health and Medicine alone", but that, on the contrary, it has unnecessarily spent about three pages on some of the details of questions like the strength of the Indian bourgeoisie, the strategy of economic development after Independence and so on. This exposition of strategy of economic development is not organically integrated in their analysis of health and medicine in post-colonial India. For example, for their discussion of malaria and tuberculosis control programme, the details about number of strikes on the morrow of Independence, or evictions of tenants during the agrarian transformation etc were not necessary. The space devoted to these details could have been better spent on arguing as to what exactly was wrong with these health programmes, what were their contradictions and so on. We are only told that they are death-control programmes (is this bad?) and that they have been used to divert the attention of the people by equating disease eradication to technical measures. It is not made clear as to what exactly is wrong with these programmes. Would not there be a malaria control programme or BCG vaccination in a socialist society? Is it that the programme was correct but that its purpose and ideological use is being criticised ? Or is it that the theoretical basis and the very organisation of these programmes is also being questioned? We need to take community medicine much more seriously. We need to study and identify how bourgeois ideology, interests, seep into the existing discipline of community medicine, and how a marxian approach can remedy this discipline into a fully scientific discipline which in turn would lead to appropriate health-interventions as an adjuvant part of socialist transformation. If this is done, (and this is "not an easy way out") our criticism of the existing health-system would be much more substantial and concrete. (This is of course a collective responsi-

bility of all of us and hence it is not at all question of merely pointing out mistakes of those who have ventured to come forward with whatever analyses they have.) However, we also believe that a rigorous analysis of the concrete — Health and Medicine— keeping in mind its dialectical relationship with the society at large should and can point to the general direction of one's analysis of the society as well. Amar-Padma's article fails to do so. Instead their analysis of health and medicine is disjointed from their analysis of Indian society. The two analyses are merely juxtaposed without any obvious inter-re'ationship having been established. It is a much more demanding task since in India, such questions have so far not been discussed within the left with any depth.

What is the implication of Quadeer s suggestion not to leave out issues of wider social order? To continue to take the case of the article by Amar Jesani/Padma Prakash; such a suggestion would logically mean that if somebody does not agree with (for example) the authors' analysis of the strength and independence of Indian bourgeoisie he would go into that question and put forward a criticism and give an alternative. SHR would then read like an EPW, or a Social Scientist; and not a journal on Health and Medicine. On the other hand she could concretely analyse the health issues from one's political point of view and present an alternative view on political economy of health, thereby refuting at the same time the author's viewpoint regarding e.g, the strength and independence of Indian bourgeoisie.

Those "doctors and other health-workers who were attracted to marxism because in it we found a better approach to handle our own contradictions and for relating ourselves to the wider society..." would definitely find SHR very meaningful if it contains analysis of their own field from a wider perspective of historical materialism. The first three issues of SHR have demonstrated this by analysing different aspects of health and medicine on a wider basis without however getting involved into a discussion on the mode of production or the nature of the Indian State. We very much believe that the concepts of historical materialism need to be grasped and used accurately, rigorously (otherwise one makes statements like -" since a mode of production is reproduced not only at the economic but also at the political and ideological levels..." a statement betraying confusion between "mode of production" and "social formation.") but it is not the task of SHR "to develop an analysis of society as well."

Articles in SHR need to be accurate on the technical matters as well. We would only register our strong reservations about C Satyamala's analysis of dysmenorrhea (painful menstruation) See her incorrectly titled article: *Is Medicine Inher-(ently Sexist*? SHR I : 2) At least our textbooks and teachers did not teach it the way Satyamala has put it. We also want to register our surprise about the way Srilatha Batliwala (Rural Energy Situation) SHR 1:2 has arrived at the caloric intake of a family (pp 75) and used it as a basis for her startling conclusion of a daily deficit of 100 Calories for a woman and a surplus of 800 Calories for a man. One can't take up these questions in this short letter. We hope, somebody else would take up these questions in some detail.

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RACE AND HEALTH CARE

Perspective from Chicago

bindu t desai

In the past 30 years the US expenditure in health care has multiplied several times now amounting to more than one billion dollars per day. This fantastic growth has not led to a closing of black-and-white health differentials. The health care system mirrors the racism and inequalities in American society. This article begins with a 'tour' of a medical centre complex in Chicago's financial and business district where the racial divide from a white, private luxurious hospital to a non-White, public, run-down hospital is unashamedly acknowledged. It goes on to show how black health statistics which had improved are now undergoing a reversal, and the Reagan administration's health budget cuts drastically affect the poor and the blacks. The oppression and exploitation of racial minorities is not unique to the US. The status of blacks in the US and the treatment meted out to them has obvious parallels to the situation of dalits in India. This article, we hope will motivate similar studies of casteism, communalism and sexism in the Indian health sector.

The United States and South Africa are the only two industrialised countries in the world lacking a system that guarantees medical care for all who need it. The past 35 years have seen an exponential growth in the United States both in the general economy and in the expenditure on health care which by itself now amounts to more than one billion dollars per day (Blendon and Altman, 1984). This growth has not led to equal access to health care or to a closing of black-white health differentials.

This perspective will examine health care in the US at different levels. First we will tour the conglomeration of hospitals and universities known as the Medical Center on the west side of Chicago. The outward differences noted on this tour will be shown to accurately mirror the larger racism and inequality in American society. We will then examine population-based health statistics as they pertain to race. After discussing medical education and affirmative action (the rough US equivalent of a reservation system in medical schools) we will analyse future trends in US health care.

A Tour of the Medical Center

About a mile west of the Loop, Chicago's financial and business district, lies the sprawling Medical Center complex comprising two medical schools, four major medical institutes and said to contain, with typical American hyperbole, "the largest collection of medical expertise in the world." The apex of this medical pyramid is the Rush Medical school with its Presbyterian-St. Luke's Hospital (PSL).

This complex occupies six buildings, four of which were built in the last 10 years, elegant hulks of steel and aluminium, spacious, airy, the newest resembling a Hyatt hotel, complete with an atrium and indoor plants. Across the street from PSL is the bottom of the pyramid, Cook County Hospital (CCH). Consisting of eight buildings, a complex built at the turn of the century, CCH is the only institution for the poor of the Chicago area. Unlike PSL there are no carpets in the foyer of CCH, no cushioned chairs either. *When one crosses Harrison street, one crosses the racial divide in the US from a white, private, luxurious hospital, to a non-white, public, run-down, hospital.* A casual visitor cannot fail to notice that something very fundamental has changed in that short walk across a street.

A block away from CCH is the Abraham Lincoln School of Medicine affiliated with the University of Illinois (U of I) Hospitals. The medical school and hospital are run by the state of Illinois. They too have spanking new buildings, neat columns of cement and glass that are centrally air-conditioned, along with old red brick structures that house the prestigious Neuropsychiatric Institute and the old hospital. At the south-west edge of the Medical Center is the West Side Veterans Administration (VA) Hospital, an institution run by the federal government. The U of I hospitals and the West Side VA form the body of our pyramid.

These four institutions cover the different types of hospitals in the US except for the newest and fastest growing type of hospital — the for profit hospital — a separate entity in itself which we will discuss later. PSL dominates the area in terms of the facilities offered to the patient, both those providing physicial comfort and the latest in medical investigative technology. At PSL there are no long waits in the Emergency Department (ED). The patient is admitted to a private or semiprivate room with an attached bathroom, each bed has a television set, a

telephone, and the hospital is centrally air-conditioned. A patient who requires an x-ray procedure or a visit to a subspeciality clinic is seen without long delay. The waiting rooms of these clinics are cheerful, provided with magazines, and so on.

In contrast, CCH patients often have to wait eight to ten hours before being seen in the ED. As the hospital has very few semiprivate rooms, most of the patients are in a large general ward. The wheel chairs could very easily be exhibited in the Smithsonian's museums, patients share a common bathroom, bring their own television set or radio and may use the few pay telephones that are available in each ward. Except for the Intensive Care and Trauma units there is no airconditioning. The many buildings of CCH are unsatisfactory both in summer and winter. The wards are stuffy and hot in summer and draughty and cold in winter. Leaky ceilings and falling plaster are not uncommon. In fact the author's office, which is on the third floor of an eightstory building, was flooded after a thunderstorm and many books and journals were damaged! The patients at CCH wait for nearly everything—wait to be seen by a physician, wait for the diagnostic tests to be performed, wait for their medicines, wait in the corridors and hallways of the hospital. No magazines are provided for these patients.

CCH patients also have to wait before a Health Systems Agency grants a certificate of need for expensive x-ray equipment. The hospital was amongst the last in the Chicago area to obtain a CT scanner and paid PSL nearly 500,000 dollars per year to use PSL's scanner. Presently PSL already has the equipment for Magnetic Resonance Imaging so that the trend of an "underfunded public hospital spending some of its scarce resources to enrich an already wealthy private institution continues" (Schlosser and Cohen,1981). PSL and CCH are the two ends of the pyramid - the apex rich and powerful serving largely white patients, the base poor, relatively powerless serving largely black and Spanish-speaking patients, mostly from Mexico and Puerto Rico (Latinos). The U of I and Westside VA fall somewhere in between these two extremes in their facilities and equipment though in neither hospital are the patients forced to wait long hours in crowded halls nor do they have to be in a large general ward.

Since 981 when President Reagan began cutting back on health expenditures, CCH has seen a phenomenal rise in outpatient visits and transfer of patients from other hospitals. Outpatient visits have gone up from 114,262 in the first quarter of 1981 to 150,146 in the same period in 1984, an increase of 24 percent whilst transfers of patients, largely because of lack of third-party payment whether by private or governmental agencies, have gone up from 110 a month to 900 a month (Pharmacy Newsletter, 1984). There is the typical capitalist picture of smaller private hospitals closing units and laying off or dismissing staff whilst CCH becomes more and more overcrowded (Kotulak, 1984).

Let us now leave the Medical Center and survey the larger issues that determine the architecture, the distribution and the racial composition of the complex.

A Portrait of the USA

a. Demographic : The black population, which has risen from 9.9 percent of the total in 1950 to 11.7 percent in 1980, forms 26.5 million of the US total of 226.5 million people. The Southern states of the US account for more than half of the total black population, 14 out of 26.5 million. Blacks have moved from the rural areas to the centre of cities and the suburbs, whereas whites have moved out of the centre of cities to the suburbs. In the past two decades the population of farm workers who are black has dropped from 16 percent to 4 percent. In 1970 seven major cities had a black majority compared to seventeen in 1980.In an additional 13 cities blacks comprised 45 percent to 50 percent of the total population.

The seventies saw a decline in the number of male-headed family households from 73 percent to 63 percent and an increase in the number of households headed by women, for blacks it rose from 31 percent to 47 percent, for whites from 8 percent to 13.5 percent. Fifty-five percent of all black children were born to unmarried mothers compared to 9.5 percent of white children. Forty-two percent of all black children lived in two-parent families compared to 83 percent of white children. Forty-four percent of black children were living only with their mother compared to 13.5 percent of white children. Moreover, the marital status of these mothers differed considerably by race: 29 percent of the black mothers were single, 37 percent separated, 9 percent widowed and 25 percent divorced, whilst the figures for whites are 7 percent, 29 percent, 12 percent and 52 percent respectively

b. Income : In 1975, the peak of a 25-year upward trend, median black family income was 62 percent of white family income. By 1982 it had dropped to 55 percent. Black families with incomes

under 10,000 dollars rose from 36.5 percent of the black total in 1970 to 40.5 percent in 1980, whilst the figure for white families remained stable around 16 percent. In the past decade, the poverty rates have gone up for all races, for blacks from 31.4 percent to 35.7 percent, for Latinos from 22 percent to 28.4 percent and for whites from 8.4 percent to 12.1 percent (Pear 1984). The income gap between black and white families varies with the composition of the household and work experience. When a family has two earners black median income is dollars 20,000 compared to dollars 25,000 for whites (81 percent of white income) whereas for a family headed by a woman, black median income is dollars 7,425 compared to dollars 12,000 for whites (62 percent of white income) (Hacker, 1983).

Seven-and-a-half percent of black families earned more than 35,000 dollars compared to 17.5 percent of white families. At the highest income levels in excess of 75,000 dollars there were 548,000 white men (0.6 percent), 11,000 white women (0.01 percent), 4,000 black men (0.03 percent) and less than 500 (0.004 percent) black women. The programs of the past 20 years that were meant to aid minority businesses have had little impact. *The total assets of all minority business amount to less than 1 percent of the assets of the Bank of America alone.* The top 100 black business listed in Black Enterprise together have assets less than that of the 500th corporation listed in Fortune Magazine's top 500 corporations (Stokes, 1981).

c. **Employment :** The overall unemployment rate which was 7.1 percent in June 1984 is 18 percent for blacks and 4.3 percent for black teenagers. The proportion of black males participating in the labour force has declined from 83 percent in 1960 to 71 percent in 1980; whereas that for black women increased from 48 precent to 53 percent, and for white women from 37 percent to 51 percent. *Black Americans are over-represented in poor paying jobs such as garbage collectors (55 percent) and household servants (54), whereas they form fewer than 1 percent of all elected officials, engineers, lawyers and 2.6 percent of all university professors and physicians.* The public sector is a relatively better source of employment for black college graduates. Fifty-seven percent of black male college graduates were employed by the government, compared to 27 percent of whites. The figures for women are 72 percent of blacks and 56 percent of whites respectively. Whilst blacks comprise 14 percent of the federal civil service they form 30 percent of the army and 20 percent of all US defense forces. These percentages have doubled in the last decade. However only 5.6 percent of the officers are black. Black employment in the public sector is a matter of necessity. The US labour market is generally manipulated by big business to keep blacks out of private sector jobs. They are discriminated against in hiring and are forced to take lower paying jobs regardless of their qualifications. For instance, black women with education similar to white men earn only half as much as white men, and earnings of black men are 70 percent of an equivalently qualified white worker. Blacks have low seniority because of past discrimination where certain trades did not admit blacks to their rolls, and they have less work experience because of unemployment and denial of equal training and educational opportunities. If there were equal opportunity in the labour market the black-white ratio of per capita earning would be 89 percent instead of 58 percent. The estimated losses due to employment discrimination exceed by a factor of 11 the estimated excess welfare payments to blacks (Swinton, 1983).

d. **Crime and punishment :** Blacks formed 22 percent of the total number of arrests made in 1980 and 48.5 percent of a total state prison population of 272,348 in 1981. The US black imprisonment rate of 498/100,000 population for 1981, which can be compared with South Africa's 471/100,000 for 1976. (King and Whitman, 1981), is the highest in the world. The US white imprisonment rate is 75/100,000. *Forty percent of the prisoners on death row are black.* Since 1930, when records were first kept, 405 blacks have been executed for rape compared to 48 whites. This figure does not include the men lynched by white mobs.

e. **Education :** In the past 15 years black enrollment in colleges has doubled from 5 to 10 percent. Although 70 percent of their parents had never attended college and 45 percent had not finished high school, these parents by working at two jobs and so on have guaranteed their children higher education which they themselves were deprived of. Government programs have also played a role but the Reagan administration has cut back aid and reduced spending for disadvantaged students by 17 percent and on loans by 27 percent (Pear 1984). Twenty five percent of black college graduates, 20 percent of high school graduates and 30 percent of high school dropouts were unemployed compared to 6.6 percent, 6.4 precent and 16.4 percent (respectively of whites). For black students 45 percent do not complete high school, another 30 percent graduate from high school and 25 percent go on to

college, whilst among whites the figures are 14 percent, 30 percent, and 56 percent, respectively.

The State of Black Health: The life expectancy for blacks (68.3) is shorter than whites (74.4) by 6.1 years. The infant mortality rate for blacks is twice the white rate, 21.8 vs 11.4 deaths per 1000 live births, a phenomenon attributable to low birth-weight, pneumonia, and influenza, and effect of maternal disease upon the newborn. However, as Sullivan points out, "These averages obscure some apalling figures in some rural areas and inner cities of our country. For example, in Georgia (in the Southern US) today the average life expectancy of blacks is 8.4 years shorter than that for whites. In six rural counties in Georgia, the life expectancy for black males is only 49.6 to 51.5 years whereas the average life expectancy for white males in the same counties is from 59.5 to 69.6 years. In Kenya, one of the less developed and poorer countries of the world, the average life expectancy of the male population is 51.3 years, exceeding that in some rural counties in Georgia. In 1980 in 50 rural counties among Georgia's 159 counties, the infant mortality rate for blacks was higher than 30 per 1000 live births and in 16 counties the rate was higher than 43 per 1000. Similar rates are found in many rural areas and inner cities all over the United States" (Sullivan, 1983). A black mother is three times more likely to die of complications of pregnancy, labour and puerperium than a white mother. A black mother is more likely to have had very little or no prenatal care. In spite of the severe social and economic stresses on black families the incidence of recognised child abuse is similar for blacks and whites, around 11/1,000

The incidence and causes of head injury differ for blacks and whites, the black incidence for both inner-city and suburban blacks being twice that of whites (400 vs. 196/100,000). Interpersonal attacks were either the leading cause as in inner-city blacks (176/100,000) or the second most common (100/100,000) as in suburban blacks compared to the fourth most common cause for suburban whites 18/100,000) (Whitman et al, 1984). These head injury figures convey only the tip of the iceberg. For example, in 1979 murder was the leading cause of death to men 15 to 44 years of age in New York City and black men in this age group had " . . . a 1 in 20 chance of being murdered, a rate that is twice the odds of an American soldier being killed in combat during World War I " (Chicago Sun-Times, 1980) Homicide is the leading cause of years of life lost

Death Rates (per 100,000 Population) Homicide According to Race and Sex

	1960	1970	1979
Total	5.2	9.1	10.4
Black Males	44.9	82.1	71.3
White Males	3.9	7.3	10.1
Black Females	11.8	15.0	14.3
White Females	1.5	2.2	3.0

(Source : U S. Department of Health and Human Services Health, United States, 1982. DHSS publication No. (PHS) 83-1232 Washington D.C. : US Government Printing Office Dec. 1982)

for non-white men in the US. Age-adjusted death for homicide have climbed steadily in the past 20 years (see Table). As the table indicates, the homicide rates for black men are seven times that for white men, whose rates are lower than those for *black* women. Blacks have a higher death rate than whites for 13 of the 15 leading causes of death. Other significant differences are in diabetes, nephritis, septicemia and chronic liver disease and cirrhosis, where the death rate is twice that of whites. Deaths from cirrhosis increased by 50 percent for whites in the past 25 years whilst for blacks they increased 20 percent.

Let us look at some other health statistics. Regular dental health care is usually unaffordable (APH, 1982). In 1978, 82 percent of rural Southern blacks did not visit a dentist. For a white family a perfect set of teeth with the ability to flash a brilliant smile is a status symbol, and middle-class families, of either race, can spend nearly 1500 dollars, per child for orthodontia. Semi-annual dental visits for regular cleaning of teeth are routine for them, while dental care is out of reach for poor families, black or white.

When asked in 1978 to rate their overall health and "well being" as part of a Federal National Health Interview Survey, black females reported the lowest level of positive well-being of all groups 37 percent compared to 70 percent among white males. Access to health care is dependent on income level. This strongly affects families headed by black women as 71 percent of them live below the poverty level compared to 40 percent for white and 51 percents for Latinos. Government — sponsored programs — Medicare and Medicaid and tax subsidies for private health care have spent a trillion dollars

since 1965. Yet 34 million people remain without health insurance of any kind. Only 33 percent of people with income *below* the poverty level are covered by Medicaid, 27 percent have no health insurance of any kind. Uninsured blacks have a 42 percent lower Physician visit rate compared to whites, lower rates of elective surgery, are less likely to have a regular source of care, and have to travel further to obtain care It is estimated that one out of every four black adults suffers from hypertension, which develops earlier in blacks, is frequently more severe and results in higher mortality at a younger age. For black women of all ages the prevalence of hypertension is equal to or higher than that of black men.

Let us now turn our attention to the delivery of health care. Though forming 12 percent of the population, less than 2 percent of the faculties of medical schools are black. The percentage of black physicians in the country has increased only marginally from 2.1 percent in 1950 to 2.6 percent in 1980. Further, the propo ron of black medical graduates has decreased in the past four years from 793 out of 14,393 graduates (5.5 percent) in 1978 to 763 out of 15,985 (4.8 percent) in 1982. Six medical schools in the US have no black enrollment and in 75 (61 percent of all medical schools) the black enrollment is less than 5 percent. Black physicians, who have always faced difficulties in getting hospital privileges, are likely to face more difficulties in obtaining these privileges as hospital administrators try to keep hospitals financially solvent amidst cost-cutting measures initiated by government and private health insurance agencies. Black physicians tend to have a patient load which is predominantly poorer, sicker and less likely to bring in revenues to the hospital. Administrators are expected to try to eliminate the physicians who admit those kinds of patients — another example of economic racism (AM News, 1984).

Note that the percentage of black physicians has increased only marginally even with the positive impact of affirmative action programs. The changing and increasingly right-wing political turn which began in the late 70's can be further expected to decrease black enrollment. Additional factors that will contribute to the decrease are of equal importance. Black students in high school and college are victims of a pervasive inequality in education. A survey of high school students in the Chicago area (which contains 92 percent of all minority students in the metropolitan greater Chicago area) showed that 56 percent had seldom or never worked in a laboratory, the dropout rate at high school averaged 47.4 percent and about half of the graduating seniors from high school were deficient in the rigorous academic subjects that are required for medical school (Orfield, 1984). The cost of medical education rises each year; in 1984 the average medical student will owe a debt of 50,000 dollars Financial assistance is becoming increasingly short with a very grave impact on black students, 80 percent of whom come from families earning less than 25,000 dollars a year. At other levels of the health industry blacks become more commonly represented as one descends in the hierarchy. In the nursing sector blacks form 11·4 percent of the registered nurses, but 30 percent of the aides and orderlies.

The American Health Care Industry

Between 1950 and 1982 US health expenditures increased more than 25 fold. The proportion of the GNP accounted for by the health sector has increased from 4.4 to 10.5 percent (Ninzburg, 1984). In the past 10 years the number of people employed in the health sector has increased from 4.2 to 7.5 million. In sharp contrast to other sectors of the economy the health industry has expanded unaffected by any of the recessions of the past 30 years. Hospital room costs have gone up by 515 percent in the last 15 years and physician services by 311 percent. In 1981 hospital costs accounted for 41 cents of each dollar spent on health, physicians, services for 19, dentists services for 6, drugs 8, appliances 2. Other costs included nursing-home care 8, public health 3, research 2, new construction 3, and administration and others, 8. Health care costs average 1500 dollars per American of which dollars 906 come from private funds and 594 dollars from public programs.

For-profit hospital chains, a relatively new phenomenon, have grown and are expected to own 20 percent of all hospitals by 1990. In 1982 the largest chain, Hospital Corporation of America, owned 351 hospitals with 50,000 beds with revenues of 3.5 billion dollars, up 47 percent from the previous year. Humana, Inc, another chain, had 14 billion dollars in revenues with stocks worth 18 dollars per share in 1968 now worth 336 dollars (Starr, 1982). The for-profit hospitals, which are touted as being more cost-effective, have actually charged more per patient than their not-for-profit counterparts, whilst generating a very high net income for their owners (Relman, 1983). These chains are also moving into outpatient centres

called Emergicenters or Urgent Care Centers, which are open 12-16 hours a day, resemble the fast-food chains in their appearance, and have a potential market of between 2—5 billion dollars a year.

Health expenses in the US are met in two major ways, either by private health insurance or by government programs like Medicare and Medicaid. In 1974 the national average expenditure per non-white beneficiary was 57 percent lower than that for white (321 dollars vs 560 dollars). As we mentioned earlier, 34 million Americans are without any kind of health coverage, because they are too poor to afford private health insurance and earn more than the minimum requirements to qualify for government assistance.

The Indian Connection

The relationship between race and health care has obvious parallels for India, such as the hospitals based on class and the use of affirmative action in medical education, which if similar to the reservation system for Scheduled Castes and Tribes in India. Both in India and in the US there is yet another link, the Indian medical graduate (better known as F.M.G. or Foreign Medical Graduate), either in training or practising in the US. There are presently about 14,000 FMGs of Indian origin in the US, forming 10 percent of all FMGs and 3 percent of all physicians in the US. Note that there are *more* FMGs of Indian origin alone than the total number of black physicians in the US. A relatively large number of Indian doctors work in inner-city or county hospitals which serve the urban poor who are largely black. There is a decreasing number of Indians as one moves into the 10 most prestigious medical schools, the so-called Ivy League.

Black and Indian relations within the medical system have not been marred by overt conflicts, which is heartening considering the generally racist attitude of most Indian physicians. The federal government has backed affirmative action in admissions to medical schools though this backing has never been whole-hearted and can presently be said to be nonexistent. *White attitudes to affirmative action parallel those of caste Hindus in India. The very same arguments are used - selection should be on 'merit,' concern is expressed for lowered standards of medical care, and so on.*

The presence of large numbers of Indian doctors also strengthens relations between the Indian elite and the health care industry in the US. They have already begun to play a role in creating American-modeled hospitals in India like the Apollo hospitals in Madras and Hyderabad and the proposed Modi-Hospital Corporation of America hospital in New Delhi.

Conclusion

Black health statistics which improved in the 60s and 70s as a result of political changes stemming from the civil rights movement which stimulated government programme appear to have peaked and a reversal may have begun. The statistics of black health must be viewed in light of the moneys poured into health care in the past 30 years. In that unprecedented period of economic growth when real income doubled for most Americans, medicine was an "important ideological prop for the ruling class in the maintenance of the domestic tranquility and social stability needed for production and profit . . . health care has been used by the ruling class to cushion some of the most savage aspects of capitalist industrialization and forestall more radical working-class demands" (Himmelstein and Woolhandler, 1984).

But the stagflation of the seventies has heralded some fundamental changes in government policies. The Reagan adminstration has cut the health budget and reduced funding for education for poor and handicapped people by 20 percent (Stokes, 1981). Maternal and child health received 25 percent less federal money in 1982. A rise in the overall foetal death rate from 10.2 to 12.2 per 1000 from 1979 to 1981 may be the first indication of the effects of present cost-cutting measures (Pouissant, 1983).

The increase in the number of black people below the poverty line, the general low income of black people, the poor opportunities for advancement in employment are not features that are unique to the US. A recent publication from England (PSU, 1984) describes the black population as occupying the same "precarious and unattractive" position in society as in the 50s. The British National Health Service encourages a "ghettostyle" employment pattern with hospitals having British porters, Spanish cooks and West Indian domestic staff (Lancet, 1984). Doubtless the pattern can be documented in other white nations with regard to their racial minorities — Turkish in West Germany, Algerian in France, Maoris in New Zealand and Australia, leading to the conclusion that "Racism is not a 'mistake' or a 'failure' of this society — it is one of its great successes" (Cooper, 1983).

As the US changes to an hour-glass economy, a large section of the population will be left in low-paying dead-end jobs. In August 1984 the US

Census Bureau showed that the number of Americans living in poverty had risen to its highest level in 18 years. As a result of Reagan Administration tax policies, families earning less than 10,000 dollars annually suffered a net loss of dollars 400 or 4 percent of income, whereas those earning over 80,000 dollars gained 8,270 dollars or about 10 percent. This will further limit the number of blacks who can climb out of the poverty and degradation they are born into. Increasingly large US cities have a black majority population. The white exodus from the cities is matched by a loss in jobs in the manufacturing, wholesale, retail and service industries. In the past 10 years alone New York, Chicago, Philadelphia and Detroit have lost a million jobs with white unemployment levels staying relatively static whilst black unemployment levels have zoomed to nearly 55 percent for teenagers. These trends are likely to continue.

"Profit has made America what it is" is the proud slogan of American capitalism, which wishes to be known by its new, gleaming, dazzling, forprofit hospitals where the birth of a baby is celebrated by the parents with champagne. In their shadow lies the decay of overstrained public hospitals serving non-white citizens and bearing an uncanny resemblance to large municipal hospitals in India. Their burden will be greater than before as for profit hospitals both "cream" off capital and resources and leave to them unprofitable diseases and the care of minorities and poor people.

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43. For an excellent discussion, see: Sander Kelman "The Social Nature of the Definition problem in Health" *IJHS* 5:4, 1975, pp. 625-642.

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Voices of Silence

I'm nine years old
And I'll never die

One winter night
while I slept
and dreamt of
enchanted morns
piping hot jelebis
warm blankets
bright green kites
and blood red kurtas
a monstrous shroud
of sticky white fog
smothered me in a
terrifying embrace
endless, eternal.

In another time
and another place
I was nine years old
and did not die.

One August day
forty years ago
a mushroom cloud
rose from the earth
killed thousands
maimed millions
wiped out generations
embalmed me
for ever.

I'm nine years old
And I'll never die
I'll haunt the ghouls
who thrive
on the blood of
men, women and children
I'll echo the
sobs, screams and gasps
of toilers in pain
the eerie
silence
of premature death
And I'll never die.

I'll sit on your
shoulder for generations
I'll goad you, worry you
anger you,
and never let you go
until you create a world
where Bhopals
and Hiroshimas
are mere nightmares
of a distant past
never to recur.

Until then.

I'm nine years old
And I'll never die.

—padma prakash

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UPSIDE DOWN RESEARCH : ANAEMIA STUDIES

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The views expressed in the signed articles do not necessarily reflect the views of the editors.

PEOPLE IN HEALTH CARE

No other profession enjoys the amount of adulation or gets its share of brick bats as does the medical profession. The problems of ill-health being what they are in our country, every discussion and debate on such issues revolves around the question of availability of doctors. This factor has assumed such a major importance that the doctor-population ratio has come to be accepted as a standard measurement of health services and indirectly of the health of a population. In this process the important contribution made by the other categories of health workers remains invisible only to come up when they strike work.

The central role doctors play in diagnosing and treating diseases is not merely confined to the provision of such services but extends to the entire field of health care including the right to define what constitutes disease and the right to treat it. The medical profession argues that if high quality services are to be made available and if 'purity' of medical practice is to be maintained it is essential that the profession retains complete control through registration and legislation. Further, the medical profession argues that diagnosing and prescribing are superior to all other skills and only those who possess such skills have the necessary authority to direct the course of health itself. That all such arguments merely form a facade for maintaining monopoly over a valuable commodity can be seen by looking at the way medical practice evolved into its present professional status.

The Beginnings of Medicine as a Profession

The emergence of the medical profession can be traced to 14th-15th century Europe which witnessed a class alliance between the upper middle class male 'regular' doctors and the feudal church leading to the ruthless extermination of other healers, mostly women, through well organised witch-hunts. Similarly, two centuries later in America the 'regulars' tried to gain monopoly over medical practice by attempting to pass state legislation in collusion with the emerging industrial and commercial bourgeoisie. Initially such attempts met with mass protests which culminated into a popular health movement. Unfortunately, the effort against legislation could not be sustained and the movement degenerated into a number of medical sects.

The 'regulars' attempt at cornering the market for their expertise was based on two factors. Firstly, the 'regulars' need to eliminate competition now arose as, for the first time, the practice of medicine was being viewed a full time economic activity. Secondly, if this activity was to bring in a substantial income, it was necessary to improve the image of the activity by giving it a professional status. As a mark of distinction the regulars adopted the Hippocratic oath and code of ethics as their standard. It is important to note that all this took place before medicine had attained any scientific aura or had developed any rational medical interventions. In fact, the regulars of that time practised what was known as heroic therapy which included blood-letting, purging and applying leeches among other such horriffic remedies.

With the support of the industrial and commercial bourgeoisie, it was just a matter of time before specific and effective interventions in the disease process developed which further consolidated the power the medical profession had gained through legislation and the physical extermination of other healers. It was this monopoly that shaped the form and content of medical care to its present form. The predominant hospital structure and the emergence of other categories of workers such as the nurses, laboratory, x-ray technicians, pharmacists and others has evolved and revolved around the functions that a doctor performed.

It was also not a mere accident that nursing emerged as a suitable profession for women or that it was subordinated to doctoring. By the time medical practice had become established as the domain of male regular doctors, women had been eliminated from health care for all practical purposes. The authority that doctors had in defining normality allowed them the power to advance pseudo-scientific theories and sexist arguments regarding the intellectual capabilities of women to prevent them from entering medical colleges. Women from the upper classes were increasingly being told to conserve their energies for the supreme function of being a woman, that is procreation, and were therefore forced to lead a sedentary life. For the women from this class who did not or could not marry, life had little option. Apart from teaching there was hardly any respectable 'genteel', non-

industrial occupation which would be socially acceptable and at the same time provide a certain level of economic independence. The goal of Florence Nightingale, the 19th century reformer was to create a paid job in health care for women. To make it acceptable to doctors Nightingale demonstrated in the battle field of the Crimean war that nursing would remain subordinate to doctoring and her attempt to make the occupation acceptable to women was to draw analogies between nursing and housework. The doctor-nurse relationship was projected as a husband-wife interaction and nursing was stated to be 'natural' to women, as it coincided with what was considered to be her natural biolgical function. Since Nightingale's effort was to create a job for the women in health care she made it quite clear that it would in no way question the supremacy of doctors or the subordinate position of nursing. Feminist historians however question the acceptance of nursing as a *natural* sexual division of labour. By taking patriarchy as an analytical category they have tried to argue that what is generally considered a natural sexual division of labour is in reality a *social* division of labour which designates men to be superior to women in all social interactions, concerning men and women.

The heritage handed down to the nursing occupation by Nightingale and other reformers has left its indelible mark on the issues identified by the nursing profession in the later years. Nurses have taken up issues related to registration, professional status and for a certain degree of organisational autonomy. But at no time has the nursing profession questioned its subordinate position. In fact one of the barriers for expanding the nurses role to a nurse-practitioner came from the nurses association in the US, who were reluctant to accept the responsibility for diagnosing and treating.

In India one could say that the health care system expanded only after independence. Although on the whole its evolution was similar to the development that took place in the West, there were certain dissimilarities. For instance, even as far back as 1883 several universities in India began to accept women as medical students. The Bhore committee in its recommendations at 1946 stated that at least 20-30 percent of seats in medical colleges should be reserved for women students. The change in attitude of the profession towards women students was perhaps related to the constraints placed by the purdah system on women in general which prevented the male medical profession's entry into areas such as maternal and child health. The post independent years have seen attmepts to provide medical services through an alternative health care structure by establishing primary health centres and subcentres to cover rural populations. But throughout all these developments adequate care was taken to ensure that the monopoly exercised by doctors would be maintained and remain unquestioned

The Bhore committee stated categorically that only the physicians trained in allopathy, should be called doctors and the doctor was to be the unquestioned leader of the medical team whether it was in the operating room or in the primary health centre. It emphasised the training of one level of doctors and recommended the abolition of the Licenciate course. Without analysing the class background of the doctors or their class interests the members of the committee hoped that training sufficient number of doctors would ensure that they would opt for the villages. That the committee was not sufficiently interested in the other categories of health personnel can be seen by the number of pages devoted in their report on the training of doctors and all other categories of workers. Later committees too have emphasised the role of doctors at the cost of neglecting all other health personnel. The need to train a 'lower' category of practitioner is discussed time and again but is always rejected on the plea that it would lead to quackery. At the same time when the suggestions that a 'lower' level of nurse be trained was made by the nursing council it was greeted as the most feasible solution given the low resources available in the country. Similarly when the Shrivastav committee made its recommendation in 1975 for training village level workers, it also allayed the fears of the medical profession by stating that since the role of these functionaries was educational, their curative skills would be limited to just a few remedies for simple day to day illnesses.

The end result of all such actions has been to create a structure which is rigidly hierarchical reflecting the class structure in the broader society. Just the way the economic status or caste of a person largely influences his/her future position in any socio-economic activity, in medical practice too these factors very often determined which level of hierarchy s/he will occupy in the health structure. This streamlining into 'suitable' rung in the hierarchy is generally mediated through the person's performance in and access to education. For instance, the three categories of nursing personnel we have in India that is the B.Sc. nurse, the Registered

Nurse Registered Midwife (RNRM) and the Auxiliary Nurse Midwife (ANM) required different levels of educational qualifications to enter into their respective training schools. This determines the class that will be predominant in each of these categories which is further consolidated by the differential salary structure and status afforded to these three categories in the nursing profession.

Since medical care is a valuable commodity and the right to provide it has been appropriated by doctors, all other categories of health workers and the functions they perform remain subordinate to that of doctors. This monopoly is often carried to ridiculous lengths, such as the prohibition on nurses to start an intravenous drip or give an intravenous injection.

Reports discussing the problems of health personnel have also mostly focused on the problems faced by doctors. One hears repeatedly that doctors have to face innumerable problems such as lack of educational facilities for their children, lack of 'entertainment' in the village and less opportunities for professional growth; and that unless these facilities are provided it would be unrealistic to expect doctors to work in the villages. But these 'problems' really pale in significance if one considers the difficulties an ANM faces during the course of her work.

Nurses : Problems They Face

The problem nurses face needs to be dealt with separately. Their contribution has been mostly towards the care of patients, although they perform important technical tasks too. The rural health services rest largely on the functioning of female health workers and their non-performance could very well paralyse the entire rural health network. Yet their status within the structure of health services has remained one of subordination. Attempts in the past to improve the status and image of nursing has very often been limited to increasing the content of the curricula or the technical content of their work. But this only ends up in reemphasising the fact that 'caring' as a function cannot be held on par with that of diagnosing and prescribing.

As women, nurses have an added problem of sexual harassment which they have to continuously face both within and outside their work situation. One reads of newspaper reports of nurses who are molested, who commit suicide because of sexual abuse or are murdered for their unwillingness to be casual sexual partner. One could hazard a guess that the women health workers in rural areas are probably exposed to such problems to a greater extent. This is not because the rural males are different from their urban counterparts but rather the situation that the nurses are in makes them more vulnerable. Isolated as they are in remote villages, with little support from other health workers these women health workers suffer in silence out of sheer economic necessity to retain their jobs. This could also be the reason why such incidents are under-reported.

Although this problem has been recognised as a major constraint there has been no systematic effort to document these incidents or evolve support systems to tackle such problems. Addition of self defense into all nursing curricula as a skill to be developed by nursing students could perhaps be one such way. But a more realistic solution would only emerge if nurses' unions take up this issue seriously to launch a struggle to make their work place safe. Indeed for such struggles to succeed they will have to become part of much larger struggle of all women. The top two categories of nursing personnel are generally better placed to form unions as they work in hospitals and are physically proximate. The ANMs on the other hand who work mostly in the PHCs and subcentres have little opportunity to come together to raise their collective demand.

The work force employed in the hospital industry is similar yet distinct from that employed in other industries. The distinction lies firstly in the fact that these functionaries work on raw materials (patients) to produce a non-quantifiable product 'health'. Secondly, the physicians and sometimes the nurses who occupy the higher level of hierarchy view themselves as professionals rather than as workers. This often contrasts with the attitude of non-medical hospital workers who view their activity merely as a job. But the situation is changing now. Doctors, nurses and other 'professional' health workers are getting unionised and demanding more and more job benefits, fixed duty hours and overtime pay, in the process assuming the form of wage earners. But even when such issues are taken up they try to use their 'professional' status to push their point. For instance, in the recent strike by the interns from medical colleges in Delhi, a placard was used with the legend 'Doctors lathi charged! What next!'

Although the demands of the 'professional' categories are similar to that of non-medical hospital

workers there is little attempt to identify these issues as common issues and to unionising on the basis of their identity as workers.

One of the limitations of this perspective as well as the whole issue on 'People in Health Care' is that we have concentrated on health workers functioning as part of the allopathic system of medicine. We really know very little about health workers belonging to other systems of medicine in India, in terms of their role and status. Further even among the workers in the allopathic system very little information is available about non-physician health workers.

Finally, a word about the people on whom the 'people in health care' work upon. As patients they are the most powerless in the interaction that takes place in a health care set up. They are neither in a position to direct the course of their treatment nor can they demand a social accountability from health personnel. The self-help movement in the west has been a reaction to such powerlessness. It remains to be seen whether the concept of self-help can ever become a viable alternative to the present system as it exists today.

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In this issue :

Sujit K. Das explores the much debated subject of the class location of doctors and queries the stereotypical definition of medical care as a commodity. Rajkumari Narang looks at various studies in anaemia to illustrate her contention that the choice and treatment of problems in medical research is rarely governed by factors such as people's needs. Imrana Quadeer examines the impact of the rural social and economic realities on the Community Health Worker's Scheme. Sumathi Nair takes a closer look at four Community Health Projects and asks what their relevance is today. The issue also carries two articles outside the theme of People in Health Care. Ekbal reviews the marxist critiques of the Ilichian School and Amalendu Das throws light on dust hazards faced by coal miners.

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DOCTORS IN HEALTH CARE
Their Role and Class Location

sujit k das

Doctors have played a central role in health care services. In India medicine has enjoyed both state and popular support since the independence. State health services expanded rapidly as did the number of doctors. Many of these doctors went into private practice or migrated to other countries and others into the state health services. This article explores the much debated subject of the class location of the medical profession. Is the general practitioner a productive labourer or a capitalist ? Does the doctor in service belong to the working class ? The author draws attention to the effect of the state sector on the medical profession and traces the growing agitational movements and organisation of state doctors in the country, with special emphasis on West Bengal. Against this backdrop he queries the stereotypical definition of medical care as a commodity.

Doctors are the most important people in health care. Even the official expert group on health, after unrestrained criticism of the doctor-dependence of our health system, concedes "Moreover, the doctor as the leader of the team can play an important role and influence the values and the quality of caring among the whole staff if he shows these concerns himself" (HFA, 1981). Radical critiques on health care call for reversal of the doctor-dependence of the health system but nevertheless wish for a change towards socialisation and social orientation of the medical profession. Popularly, doctors are looked upon as next to gods since they deal with life and death and no wonder doctors are often beaten up when a patient dies or there is allegation of negligence on the part of the doctor. The popular view offers the medical profession the key position in health care; expects it to protect the health of the people; regards it as the greatest depository of knowledge and wisdom regarding health; believes that the weakness of the health care service is due to lack of adequate number of doctors. From the Presidents of India down to the Taluk functionaries they have all been exhorting the medical profession to be patriotic enough to go to the remote villages and stay there to serve the under-privileged rural people.

Surprisingly few attempts have been made to investigate, analyse and understand the medical profession in the perspective of concrete reality. Despite its crucial role, the medical profession is commonly assessed on the basis of subjectivism. Just as the modern medicine had been borrowed from the west, the Indian critiques of the Indian medical profession appear, more often than not, to have been borrowed from the western radicals. The profession had hardly been looked into as what it is, but often analysed on the basis of what it should be.

Development of the Profession

In India the art and practice of healing devolved on to a group of socially engaged men, and several systems of medicine developed and have survived till to-day. Each system was somewhat well-developed corpus of knowledge and its practice had traditionally been taken up by successive generations. Following the changes in the relations of production and exchange, independent practitioners emerged. Later, systems of modern scientific medicine (allopathy) and Homeopathy came from the west and took roots.

In the 19th century, modern medicine had little to offer. The 20th century, heralded the appearance and development of a scientific basis and since the thirties, appearance of chemotherapy and improved surgical techniques created a surge of interest in, and attraction towards, modern medicine owing to its dramatic life-saving achievements. Popular attraction received a further acceleration around and after the second world war as a result of the invention of newer wonder drugs and technology. The practice of modern medicine, likewise, earned a heightened respectability and soon rapidly emerged as a profitable livelihood.

Demands for the expansion of the hospital services have been raised from all corners. The situation is a parallel of what prevailed during the expansion of hospital services in the National Health Service (NHS) of UK. "For the politician, it might be assumed, there could be no better advertisement than a shining new hospital: a visible symbol of his or her commitment to improving the peoples'

health. For the doctors, new hospitals meant the opportunity to practise what is considered to be higher quality medicine. For the consumer, in turn, new hospitals surely meant better services with higher standards of treatment (Klien, 1984). No wonder therefore, in a market economy, almost all aspiring doctors moved towards the practice of curative medicine with its life-saving and relief-producing implements. Illiffe has put it succinctly, "Just as abortion would be a sacrament if men became pregnant, so health professionals would stampede into preventive work if prevention could be made into a marketable commodity" (Illiffe, 1983).

Introduction of welfare activity by the state saw the expansion of state health care service and the number of health personnel increased rapidly (Table I). Later, indigenous systems and homoeopathy, for reasons not discussed here, also received state patronage.

Table I

Year	No. of Med. Colleges	Students admitted	Qualified
50-51	28	2675	1557
60-61	60	5874	3387
70-71	95	12029	10407
80-81	106	10934	12170

Figures are incomplete as a few centres failed to report.

Source : Health Statistics of India (1982) : C.B.H.I., Ministry of Health & F.W., Govt. of India.

Table II Year 1981.

Total No. registered	Went abroad	Returned from abroad	Regd. in Employment	No. admitted in P.G. Courses	Total No. Regd. Doctors in other systems
268,712	4766	2381	16406	8241	382,686

Source : Health Statistics of India (1982) and University of Calcutta.

These doctors opted for private practice or other employment or post-graduate education for specialisation, or migration to foreign countries. For the last few years more than 2000 doctors have been settling abroad annually. There is no available data to indicate the number of doctors engaged in each category but the distribution follows the market situation and economic compulsion. Old pattern of general practice recruits less and less. Number of women doctors has been steadily increasing since 1976-1977 and they generally settle towards certain culturally chosen occupations e.g. gynaecology and obstetrics, pediatrics, pathology, plastic surgery, anaesthesiology, non-clinical disciplines in medical colleges and also dental surgery. Most of the women opt for employment and independent women private practitioners prefer G & O and Pediatrics. Unemployment is a late development (Table II).

Class and the Medical Profession

Private Practice and General Practice

In West Bengal, approximately 70 percent doctors are engaged in private practice. They include independent practitioners, Insurance Medical Practitioners of ESI (M.B.) Scheme, part time practitioners of the state and private sector employees. The General practice has been changing with changing social relations, scientific developments and cultural attitudes. In earlier times, the general practitioners (GP) could not demand any consultation fee and had to distribute drugs to his clients. He then used to incorporate what he considered to be his due consultation fee, within the price of the drug. As a result, the consumption of non-essential drugs and compounded drugs was high. Also the actual price of a compounded drug is difficult to check and verify. Later, consultation fee has gradually been introduced and has received public acceptance, resulting in the development of a class of GPs who are only prescribers.

Indian society has a long tradition of voluntary efforts for charitable medical care to the community. In fact, a good number of clinics and hospitals had been established through philanthropic endeavours. In order to earn and maintain 'nobility', the price doctors had to pay was to attend to emergency patients, give free 'service' to a few indigent patients and offer honorary service in the voluntary institutions. Besides respect, speedy recognition and fame, this attachment to charitable institutions used to bring other material returns. The doctor used to test the emerging therapeutic techniques on poor patients without informed consent and without risk and later employ the technique thus perfected, in cases of paying clientele in the private practice. Actually, the situtation is so advantageous that there is serious competition among the contending doctors to secure honorary employment in the charitable medical establishments. A sort of corrupt practice was also rampant where the patients had to pay the honorary doctor in order to avail of the free hospital service. This malpractice has now been almost eliminated in West Bengal due to higher level of consciousness of the people, but is still in vogue in many other states.

The GP therefore, acts as a retailer of drugs; sells his skilled labour designated as 'service' to

individual buyers; and it may further be argued that he employs his knowledge and skill as capital and sells the product of his own labour in the market as commodity. Is he a productive labourer or capitalist? Karl Marx, in his inquiry into the social status of independent handicraftsmen and peasants as well as that of producers of non-material production e.g. artists, actors, teachers physicians, etc., said "It is possible that these producers, working with their own means of production, not only reproduce their labour power but create surplus value, while their position enables them to appropriate for themselves their own surplus-labour. ..... And here we come up against a peculiarity that is characteristic of a society in which one definite mode of production predominates, even though not all productive relations have been subordinated to it. ... The means of production become capital only in so far as they have become seperated from labourer and confront labour as an independent power. But in the case referred to the producer – the labourer is the possessor, the owner, of his means of production. They are therefore not capital, any more than in relation to them he is a wage-labourer" (Marx). The GP is actually engaged in a precapitalist mode of production, but nevertheless produces commodity of use value and sells it for exchange value. Our much maligned GP is not altogether a demon or blood sucker. He is just a small commodity producer who still renders essential service which the state is unable to provide for. A close study of the GP will reveal how the western medicine took roots here, changed the health culture and in the process changed its own.

Speed of expansion of the market of private practice has lately been thwarted and is gradually being squeezed for several reasons. Increase in the purchasing capacity of the people cannot keep pace with the increase in the number of doctors thrown into the market. Secondly, expansion of the state sector in medical care has been impressive and concentrated in the urban areas and these are totally free or heavily subsidised. Socially dominant classes who can afford to purchase medical care, have been able to capture the largest share of the free/subsidised state service. As a result, private sector medicare did not develop to the expected level. Thirdly, private practice has a latent period to reach profitability. Lately, increasing numbers from the lower income groups have been recruited in the medical profession, who cannot afford to sustain this latent period. All these have resulted in increasing trend towards employment and migration abroad, unemployment and underemployment.

Doctor-in-Service

Expansion of organised medical care service through state, public undertakings, ESI, big private industry and voluntary organisations has resulted in a marked increase in the number of doctors in employment. Though private medical practitioners still constitute about 3/4th of the medical profession, the doctors-in-service attract the major, if not entire, attention in any debate on health care owing to the fact that the organised sector is the trend-setter and almost always features in planning and debate In this context, the present discussion dwells largely on the doctors-in-service among the practitioners of modern medicine. However, no discussion on the medical profession or for that matter, medical care is compreshensive unless it also includes private practitioners of modern medicine and of the other systems.

The non-practising employed doctor is actually a wage earner destined to identify himself with the aspirations of similar wage-workers of the so-called white-collar category. Though the 'noble profession' ideology provides an excellent instrument for the private practitioners to maximise profit in their trade, it has ironically proved to be a constraint in the way of fulfilling his aspirations. Because of the stigma of 'noble profession', he cannot claim fixed duty hours; cannot claim 'overtime' i.e. extra remuneration for extra work; cannot employ 'red-tapism' in his daily work-load; cannot even utilise his earned leave to escape from the drudgery of frequent emergency duties. He is further handicapped in regard to democratic rights so much so that unionisation of doctors is frowned upon by the society; agitative action is taboo; call for strike in hospitals is taken to be sheer blasphemy. On top of it, the doctor has little hold in the administration of medical care and in the matters of policy-making, programming and power hierarchy, the doctor is placed in a lower position subordinate to the generalist administrator But more about this later.

Do they, then, belong to the working class? The question has never been raised or debated. On this issue, the dogmatic marxists adhere to Reductionist ideology. "Reductionism involves a version of historical materialism which presents all social phenomena as 'reducible' to, or explicable in terms of, the 'economic base'. Thus political struggles or social ideologies are explained as manifestations or 'reflections' of economic forces. In this presentation marxism is reduced to asset of

relatively simple and universal 'laws'. ..... Such a position is guilty of 'essentialism', that is of seeing the economy as embodying the essence of all social phenomena which are then simply expressed or made manifest in the social world" (Hunt, 1978). This methodology necessarily attempts to define classes at the economic level and attaches little importance to the forces operating at the political and ideological level Working class is differentiated by the difference between productive and unproductive labour. Mere wage-earning or labour-selling do not provide entitlement for entry into the working class. "The working class in the capitalist mode of production is that which performs the productive labour in that mode of production. ..... Although every worker is a wage-earner, every wage-earner is certainly not a worker, for not every wage-earner is engaged in productive labour" (Poulantzas, 1975). While in cases of white-collar wage-workers of the industry, transport and mercantile enterprises, Marx concludes that they are productive labourers, the physicians-actors-teachers etc. are also productive labourers. He observes, when they sell their labour power (manual or mental) in a capitalist establishment which appropriates their surplus labour and makes a profit by selling the products as commodities. But he adds, "All these manifestations of capitalist production in this sphere are so insignificant compared with the totality of production that they can be left entirely out of account" (Marx, 1978).

Technology, capitalist organisation of production and productive forces are much more developed now than at Marx's time, though the development of medical care service as a sector of capitalist industry is still rudimentary in India. The new working class of advanced capitalism — the technicians, engineers, scientists etc. — is held, by Serge Mallet, not only to be revolutionary but the 'avant-garde' of the revolutionary socialist movement (Mallet, 1975). Services have long been developed into profit making industry in the developed countries.

Here in India, doctors as wage-earners are now commonplace. To what class do they belong? The established left still subscribes to the liberal concept of health care and therefore, has yet to face this question. The progressive view, however, is confusing, to say the least. "The capitalist can organise the production of surplus value through the provision of health care and can realise higher profits in this service industry. It is immaterial whether the surplus value is realised directly through the productive activities in the clinics and hospitals owned by the Capitalist or indirectly, through the provision of health care by the State to maintain or increase the productive capacity of the labour." (Jesani and Prakash, 1984). Such an assertion is based on dubious premises that medical service has developed into an industry; that the State also acts as a productive enterprise; and that State Health Care Service is an organised investment by the capitalist class on the industrial productive labour.

What then is the status of the producers of 'health care'? The above assertion automatically places the employed doctors into the category of the working class. But alas, the entire medical profession carries, in the radical viewpoint, the same class background as the bourgeoisie and performs its predestined social task of legitimising-strengthening and maintaining the bourgeois medicine. Why this confusion? "The mere quantum of the so-called marxist analysis of health, done in the West has so impressed us that we have literally lifted their formulations and transplanted them on the Indian scene, without even thinking whether they are applicable. Further, in our hurry to fill in the gaps in our knowledge, we have concentrated on theory of health and medicine. That theory, however has been sought by filling the accepted theoretical constructs with Indian data and developments rather than beginning with health and health services itself to test the assumptions as well as the theoretical constructs" (Quadeer, 1984). In other words, in order to understand and analyse its status, role, trend and potential in health care, we have to make an actual study of the medical profession in its concrete reality.

Professionalism

"Professionalism within health care is based on the idea of 'service' and on the practice of trade. It is a market concept expressed in the relationship between a customer (the patient), a tradesman (the professional) and assorted suppliers (the drug industry, other superior professionals). Trade secrets are necessary for the maintenance of the market relationship, and permit professionals to define themselves as special, and beyond the control of those ignorant of these 'trade secrets'. The autonomy of health professionals — particularly doctors rest on the range of their trade secrets" (Illiffe 1983). With this conception it follows that professionalism could be curbed or even abolished with the

abolition of market economy i. e. private trade or commodity market in health care. This appears to be another instance of radical presumption. Professionalism is not a creed peculiar to the medical profession nor to the bourgeois ideology. Professionalism not only regins in private medical trade but also exists among the employed non-practising professionals, among the medical teachers of non-clinical disciplines and among the doctors engaged in public health work.

Professionalism exists in pre-capitalist economy and continues in the post-revolutionary societies where the ownership of the means of production has undergone a change and private trade almost abolished. In a round table discussion on private medical practice organised by WHO, it has been revealed that private practice, in certain forms exists and is developing in the socialist countries (Roemer, 1984). Medical co-operatives are springing up where state-employed doctors are allowed to spend upto two hours a day and are entitled to a 50 percent share of the payment received from the patients in cash for the services rendered. Even in China, barefoot doctors who are essentially paramedics, are allowed part-time private practice. A common practice developing in these countries is that of giving gifts to doctors in hospitals and often the gifts are relatively large amounts of money. All this is done to ensure better quality of service (which is by no means certain). How is the quality of service to be determined ? How are measures and gradations to be made ? There is as yet no acceptable indicator or scale. Hence, quality will be determined differently by different social ideologies and health cultures, and the latter are manipulated by professionalism. Specialisation and mystification are only other facets or instruments of professionalism utilised to maximise the price of medical service in private practice.

Specialisation, however, is not an exclusive exploitative imposition. It is also an integral part of social division of labour, not only unavoidable but necessary in any social formation including the one based on non-exploitative mode of production. What is relevant is not to confuse social division of labour with capitals' division of labour. In an analysis of modern chemical industry in UK Nichols and Beynon have shown that though technical division of labour is a must in any industry in any mode of production, in the capitalist mode the technical imperatives are subordinated to political imperatives and technology exists to serve and augment capital. "Certainly in any mode of production, given the existence of specialised training, some men will be more technically competent to solve certain problems than others This is so obvious as to hardly require stating. But something else which should also be obvious is often ignored. For concern with the technical structure of complexes like Riverside (the factory site) can also too easily obscure the fact that they are not even designed to make chemicals, but to make chemicals for profit The reality is that their division of labour is capital's division of labour ..... (Nichols and Benyon, 1977) Professionalism, also, could make its contributions in the struggle against the ruling class and the state. The history of the development of health care service in Great Britain has shown that the professionalism of the doctors thwarted, at different stages, the attempts of the state to reduce or withdraw the medical benefits demanded by the people. Here in India also, professionalism often reinforces the demands of the people for the egalitarian distribution of medical services against the discriminatory practice of the state.

What do we expect from the doctors? Here, the bourgeois, left, radical and popular views converge and appear as if grossly influenced by the ideology of professionalism. A doctor should render utmost efforts irrespective of the socio-economic status of the patient; should always ungrudgingly serve emergency patients without consideration to his own convenience; should always be guided by the code of ethics formulated by the profession; should act as a friend-philosopher-guide to the patient; should exude hope and confidence in his conduct etc. etc. Concomitantly, the community accorded certain privileges to the profession. The doctor knows best; he should not be questioned; he has the unchallengeable right to handle and manipulate the patient's body; his good faith is taken for granted even in cases of the patient's death and disability.

What do the doctors think about their own role expectation? In a large study in two medical college hospitals in Tamilnadu, Venkatratnam revealed that the doctors' understanding of their role expectation is a composite of their own individual perception, occupational compulsions and organisational (professional and institutional) principles (Venkatraman, 1979). Role expectation comprises of professional, academic, research, managerial and social. Many interesting facts and controversial issues regarding doctors' responsibility towards patients, role towards other health workers, requirements of teaching-training-research, level of

communication with patients, social responsibility and so on have been revealed in the above study and these should be analysed before rushing to issuing sermons on doctors' role expectation. Peculiarly, the ICMR-ICSSR report, while castigating the profession for its negative attitude towards preventive and promotive health care recommends for their 'alternative model' of health care service that "the doctors will still continue to play an important role in the new health care system. But this will not be over-dominating and will be confined more and more to the curative aspects of the referral and specialized services for which they are trained" (HFA 1981).

Universally, the understanding of role expectation of the doctors suffers from an idealistic approach. All expect the doctor to be humane, shorn of commercial urge, dedicated to patient's welfare, imbibed with principles of social justice etc etc. No one asks why the doctor should follow such a model or what objective conditions may compel him to do so? Or for that matter, what objective conditions persuade the doctor to do as he does?

Perception of role performance differs between the professionals and the consumers for obvious reasons. Confusing and paradoxical situations prevail. While the State hospitals and the doctors are almost always on the dock by the consumers and mass media for the severe shortcomings in role performance, the very same hospitals and the professionals are very much in demand for their high quality and indispensible medical service. True, the service is attractive because it is free. But even amongst affluent consumers the notion prevails that the hospital doctors are more skillful, knowledgeable and equipped. Generally, the doctors' notion on role performance is that they do their best under the given circumstances and they could do more if they have a free hand in the administration which is responsible for the constraints. The factors underlying these confusions and paradoxes are being unravelled by the growing momentum of the organised movement of the doctors.

Doctor's Organisations and Agitations : West Bengal

Medical practitioners got themselves organised under Indian Medical Association in the thirties. Later, practitioners of each speciality discipline built up separate associations. The basis of these associations is professionalism, academic and pseudo-academic. It should be mentioned that non-clinical and even public health disciplines organised their own associations. But the associations could not cope with the task of tackling the emerging aspirations of the employed doctors. In fact, a contradiction developed between them. Ironically, the bone of contention was economic as well as ideological. The ideology of professionalism appeared to be a drawback for the service-doctors. The pay packet of service was unattractive not only in comparison with the income in private practice but also compared unfavourably with that of the similar category of government officers, for instance the civil service, or the engineering service. This situation had been a hangover from the British days when doctor's pay packet was deliberately kept low with the understanding that they would make it up with the earning from private practice, a privilege then enjoyed by all service-doctors. Later, with the expansion of the state sector, more and more doctors had been employed on non-practising basis but this principle of wage policy did not change.

In matters of job requirement, job perquisites and job satisfaction, there was nothing glamourous to look forward to. Duty hours was virtually feudal - a doctor was 'on call' for 24 hours a day for emergency need and seven days a week; almost all health centres in the rural areas were manned by one doctor in each; there was no ceiling on the number of patients one had to attend daily; a rural medical officer, in addition to his clinical duties, was entrusted with the tasks of family planning, MCH, School Health, Immunisation, Epidemic Control Administration and what not. System of recognition and appreciation of good and dedicated service was absent. Avenues for higher education, promotion, research, or even a transfer to a better post after a scheduled period of service, were severely limited. Because of longer period of training to acquire qualification, a doctor usually enters service at a later period compared to others and consequently is entitled to a lower pension and lesser amount in the retirement benefits.

The state hospitals were always understaffed and underequipped and hence, the scope of practicing what the doctor was trained for, was thereby limited. On top of these, the health administration was run by the generalist administrators. These people had no career attachment to the health department; were not answerable for failure or mismanagement; had no inclination to learn the problems of the health care service as well as of the employees. The doctor had no voice in health planning, hospital service development and technical development. The autonomy enjoyed by the profession

in regard to clinical practice in the NHS of UK was not even partly granted to the doctors here. On the other hand, the political authorities found it convenient to put the blame on doctors and other health workers for all their failures, misdeeds and incompetence in the health sector. Consequently, doctors and the health workers, as they were the ones, at the counter, had to suffer the burden of public wrath in the form of physical assault, humiliation, abuse and so on.

What did the doctors do to overcome these adversities? It is worth while to note that the state service was last in the list of priorities of a new medical graduate. The order being private practice, specialisation, migration abroad and if all fail — then he opts for service. Lately, because of competition, the options have shrank greatly and large numbers are now competing among themselves for limited state service; doctors from Orissa, Assam, Bihar, Bangladesh are now applicants to the West Bengal State Service.

In this situation how have the service-doctors reacted ? Quality has been the first victim and expectedly so. No matter whether 50 or 500 attend the outpatients clinic the experienced doctor manages to tackle them within 3 hours or so. In a 100-bed hospital, 200 patients stay indoor regularly but the same number of doctors and health workers treat them without spending any additional time in the hospital. The next escape route is private practice — both authorised and unauthorised. In west Bengal except in the case of clinical teachers of the majoritv of medical colleges and doctors in the district and subdivisional hospitals, private practice is not allowed. In fact, 7/8th of the State doctors are non-practising. The States of Orissa, Andhra, Maharashtra, Punjab, Hariana and others have either entirely or partly non-practising state service. Some other states have indicated that they will too follow suit. The entire Union government and the public undertakings sector is non-practising. Expectedly, most doctors aspire for the limited practising privilege of the service and in the non-practising sector, unauthorised private practice is growing wherever there is scope and opportunity.

The question of the alleged reluctance of the doctors to serve in the rural institutions should be understood and analysed with this background in mind. Concerned people have swallowed the government propaganda that because of such reluctance on the part of the doctors, the government despite earnest efforts and liberal financial allocation, fails to provide medical care to the rural people. By absorbing this propaganda uncritically, the health activists on the one hand, unwittingly agree with the government that medical care is synonymous with the presence of a doctor, fall in another trap that provides for offering barefoot doctors Homoeopaths-Ayurveds and simple home remedies for the villagers in the garb of tradition, indigenous culture and community medicine. The fact is otherwise. It is deliberate government policy to keep the service conditions of the rural medical officers unfavourable with a view to discourage the doctors from taking up rural postings; and in this attempt, one must admit, the government has been successful to the exent that even the occasional few socially conscious people-oriented young doctors, after a stint of rural service, try their utmost to move to the urban area or quit. ' The Siddhartha Roy Congress government's regulation of 1974 stipulated that physicians with specialist degrees would enjoy a higher pay, a special allowance and would be exempt from rural postings. It was only natural that young doctors went in for specialisation just for the sake of avoiding rural posting, if not for higher emoluments. The Left Front government has not felt it necessary to change the regulation" (The Statesman, 1985). This policy in fact, induced even those doctors, who had already settled in the rural areas, to move for any type of specialisation and settle in urban areas. Does it show reluctance on the part of the doctors or that of the government? Lately, the Marxist Left Front government in West Bengal introduced against the protest of the medical profession, a short term three year medical course to train up doctors who would fill up the rural vacancies. Next year, the junior doctors in the State launched agitation for jobs in the State service and demanded that all rural posts be immediately filled up by currently eligible 3000 unemployed young medical graduates. Under public pressure, the Left Front publicly declared that there were no such vacancies and they were unable to provide jobs, not even in the rural areas. The short-term medical course had to be wound up in any case, the discrimination against the rural medical officers persists. No one, of course, raises the question why doctors, of all people, must go and serve the villagers who are ignored in respect of all other consumer goods. It must be understood that the recent organised demand of the junior doctors for rural appointment is not due to any sudden surge of patriotism but simply due to pressure of unemployment.

In course of time, however, the consoling compensation through private practice turned out to be insufficient. Service-doctors and junior doctors ventured to organise their own bodies on trade union basis to voice their grievances which did not find deserving place in the earlier professional bodies like IMA which was dominated by private practitioners. In 1973, junior doctors launched a movement in West Bengal demanding better pay and service conditions, and better provisions in the State hospitals They had to go on strike and come out partially successful by obtaining pay hikes. In 1974, the State doctors (in alliance with the State engineers) resorted to strike for 41 days but maintaining the emergency services. Their demands were not only economic but encroached on the political and ideological level. They demanded exclusive executive power for the scientists, technologists and professionals in the scientific and technical departments of the State administration which were the preserve of the generalists, and parity in pay scale with the Indian Administrative Service (IAS). This agitation generated intense debate throughout the country and the issue has not yet been settled. The West Bengal government ultimately made a few concessions but unfortunately, with the subsequent imposition of Emergency in the country, the terms of the agreement were not implimented, leaders were sacked and doctors terrorised. The fall out of this agitation was visible elsewhere; the pay scale of the doctors in the Union government and public undertakings were soon revised upwards to bring it on par with that of the IAS at the lower level.

This agitation made a breakthrough on several grounds. People saw to their surprise that renowned professors and principals of the medical colleges, eminent specialists and senior engineers holding high ranks in the state service, walking in processions, squatting on the pavements and holding street-corner meetings. It then struck them as a novelty that the 'noble' doctors could resort to agitative ways that befit only common workers. Doctors, it was stressed, had no right to jeopordise the well being of the patients by striking. This agitation, perhaps for the first time, focussed people's attention on the affairs of the medical service, particularly into the government assertion that the doctors and health workers were responsible for all the ills in the system. This agitation was followed by a series of agitative movements all over the country, mostly by the junior doctors but also by the state doctors in Delhi, UP, Orissa, Assam, Maharastra Andhra, Bihar - though with different demands as was expected owing to different levels of development. Everywhere, organisations of service-doctors sprang up independent of the IMA. The agitation in West Bengal also brought changes in the orientation of Bengal IMA, which despite its long history of co-operation with the government had to come out actively in support of the service-doctors and junior doctors.

Sporadic movements on various issues such as reduction of job burden, physical security at the work-site, better provisions for emergency care, improvement of rural medicare and more scope for higher education have taken place culminating in the 1983 statewide movement. The junior doctors demanded, besides bettrer pay, service conditions and provisions for emergency care and a health policy with priority to preventive care. The Left Front Government took recourse to unprecedented repressive measures using party cadres and the police. Brutal police violence on the junior doctors brought state doctors onto the scene, also in an unprecedented manner. Perhaps for the first time in the world, state doctors in their strike action withdrew from the emergency services. This was an organised retaliation of the doctors against organised terrorism of the Left Front government who reiterated the earlier declaration of the Congress regime that the doctors had no right to strike. The government had also earlier started denying the doctors the right to any agitative activity. This was strange and definitely unacceptable to doctors who had to earn democratic rights through hard struggle in 1974 when the conduct rules for the government servant had been revised. The doctors received, unprecedented public support even though they committed such so-called anti-humanitarian acts as deserting the emergency counters. The government finally had to withdraw the victimisation and punitive measures and concede the immediate demands of the strikers.

There are now indications that service doctors are now beginning to realise that the aspirations of their occupation are directly related with the nature, object, standard and extent of the state health care services. They have now raised the demand for clear declaration of the aims and objects of the state health policy and a controlling role in implementation, a plea to share responsibility with power. The service-doctors in West Bengal demanded that free state medicare be exclusively reserved for the indigent population only, which produced indignant protests not only from the privileged middle class

but a few political parties with 'Left' labels. Different mass organisations are now holding meetings and seminars on the health policy and state health acare administrtion There has also been a renewed spurt in the agitative movement of the junior doctors and service-doctors in other states for instance Bihar, UP, Orissa, Maharastra and Delhi.

These organised movements of the service-doctors brought many undiscussed issues into public attention. Should the doctors be treated as a special occupational group with limited democratic rights and additional responsibilities to society? And if so, why? What are then the limits of the forms of agitation for the doctors, if they have grievances to agitate for? Are the doctors also entitled to fixed duty hours just like others? Why should doctors alone have a moral or social obligation to serve the villagers who are deprived of, and are discriminated against in respect of all other commodities and services? Should the generalists enjoy the power and the doctors bear the responsibility of state health care service? And finally, who doctors are primarily responsible to, the employer or to the patients or to their professional ethics?

The foregoing development and issues persuade us to take a new approach — the marxist approach — to determine the role expectation and analyse the role performance of the medical profession. In a market economy, the medical profession cannot but be governed by its rules and to expect them to swim against the current is an utterly idealistic proposition. The service-doctors tend to behave as other wage-workers do. They try to extract as much wage with as little labour as possible, in contrast with the employer's tendency to extract as much labour with as little wage. It is all very well and easy to define 'medical care' as a commodity in the capitalist mode of production but it needs explaining how the universally free state medicare remains a commodity and behaves as a commodity. Or what here is the relation of production between the owners of the means of production and the sellers of labour power? It needs study to understand why the primary need of food-clothing-shelter is denied to a dying citizen but free medicare service is demanded and created and, the nature of the class struggle that brings about this state response. All these studies in the concrete reality of the Indian situation will bring us back to the question of class identification.

Conclusion

"The separate individuals form a class in so far as they have to carry on a common battle against another class; in other respects they are on hostile terms with each other as competitors. On the other hand, the class in its turn assumes an independent existence as against the individuals, so that the latter find their conditions of life predetermined, and have their position in life and hence their personal development assigned to them by their class, thus becoming subsumed under it" (Marx and Engels 1976). The individual's role in the production process, his location in the social relations of production, the productive or unproductive nature of his labour - all these form the basis of inquiry. But as regards the identification of class, the common interest, common behaviour and common action, which are often independent of individual wills, — or the common outlook towards social events, political and ideological orientations — are also important and often act as positive forces. To this Engels has drawn attention : "The economic situation is the basis, but the various elements of the superstructure-political forms of the class struggle and its results, to wit. Constitutions established by the victorious class after a successful battle etc., juridical forms, and even the reflexes of all these actual struggles in the brains of the participants, political, juristic, philosophical theories, religious views and their further development into systems of dogmas - also exercise their influence upon the course of the historical struggles and in many cases preponderate in determining their form" (Marx and Engels 1965). In order to understand the social role of a group of similarly placed wage-earners, their historical development in relation to the changes in the mode and relations of production as well as their political and ideological expressions vis-a-vis the dominant political and ideological current in the given society, are to be studied. Class is actually, a historically developed, ideologically shaped and economically determined dynamic relationship expressed through class struggle. Thompson's notion of class reveals this aspect. "By class I understand a historical phenomenon, unifying a number of disparate and seemingly unconnected events, both in the raw material of experience and in consciousness. I emphasize that it is a historical phenomenon, I do not see class as 'structure' nor even as 'category', but as something which in fact happens (and can be shown to have happened) in human relationships ... Like any other relationship, it is a fluency which evades analysis if we attempt to stop it dead at any given moment and anatomize its structure.... The relationship must always be embodied in real people and in a real context" (Thompson 1982).

The social role of the employed section of the medical profession is therefore, determined by their role in the dominant mode of production and by their interaction classes in the social events. Sellers of labour power primarily sell their labour power to earn a living not to produce commodities. By the complexity of social division of labour, some have greater interest in their products while others have greater interest in the production process. Each of the occupations has an ideologically determined skill, status and price. All have common despair in unemployment and all undergo the similar feeling of inferiority, helplessness, subordination and subjugation in relation to their employers. Vic Allen, thus describing the wage-earners, concludes that bourgeois sociological stratification of different hierarchical classes and the reductionist categorisation of productive and unproductive labourer without empirical substantation, will not be helpful in an attempt to differentiate between wage earners (Allen 1978). In the case of health professionals, the study should go much deeper and wider. Health and medicine are not mere sterile figures or say, mortality and morbidity statistics. Illness involves pain, fear and desperation in real life and these saturate the milleu wherein medical care operates. Cultural instincts and ideological creeds strongly influence and occasionally determine medicine and medicare. Medicine in its practice and institutional forms is not merely commercial exploitation or oppressive power relations imposed by the dominant class — as radicalism may have us believe — but is a resultant of class struggle, of antagonistic and non-antagonistic contradictions between classes; of interactions at the economic, political and ideological levels

The question of the role and behaviour of the medical profession is relevant to the building up of a Peoples Health Movement (PHM). PHM is not merely imparting health education to the individual or community. PHM does not end with the exposure of the inadequacy and exploitative nature of capitalist medicine. PHM needs to acquire expertise, to develop sound scientific basis of egalitarian health system, to search for the mechanics of building up of a socialist health culture and to strive for subordination of medical science to social needs and aspirations. It is a stupendous task and the role of the health professionals is crucial. This necessitates objective study of the profession before theorising study of the developing contradiction in the profession and the nature of the contradiction; the dialectics of the medicine; the development of the elements of socialist medicine during bourgeois dominance; the dialectics of cultural change and development. In the ensuing struggle the weapons of the bourgeois science and technology ought to be counterpoised by the weapons of peoples' science and technology. Involvement of the medical personnel will not be determined by humanist exhortation or so called deprofessionalisation but by class contradiction and class struggle. The medical profession or a section of it - be it categorised as the 'new petty bourgeois' (Poulantzas, 1975) or the 'new working class' (Mallet, 1975) will have its own determinant role to play and the PHM activists must need to analyse and understand this role in order to formulate the strategy and tactics in the emerging social events of the health sector.

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UPSIDE DOWN MEDICAL RESEARCH

The Case of Anaemia

rajkumari narang

What conditions and influences the development of medical research ? What motivates a researcher to choose a particular problem area ? Under colonial rule research was a monopoly of a small group of scientists, mostly British some Indian. Curiosity and the need for experimentation and perhaps some concern for the suffering generated a number of interesting and relevant studies. After the '50s the orientation and the ethos of medical research have changed — the problem areas are not those which benefit the majority but those which are most likely to bring recognition to the researcher. Even when occasionally, an area of relevance such as anaemia is chosen, it is looked upon as a purely medical problem, deemphasising the social and epidemiological aspects. This results in a medical/technological solution which can at best, provide temporary relief. The author critically reviews the studies on anaemia over the years to illustrate her contention that the choice and treatment of problems in medical research is rarely governed by factors such as people's needs

Doctors and scientists from the very early part of this century belonged to a privileged class trained and employed by the British and lacking in involvement with the needs of the native population. We find however that there is a certain amount of eagerness to learn, experiment, and change things inspite of the primitive technology and little basic knowledge in the field of physiology. Although the knowledge of science was incidental and the doctors were guided by the prevailing assumptions and biases of their class, the mood of liberalism sweeping the country encouraged them to be open in their pursuits.

The science of medicine was still young and technology not so well developed. The lack of sophisticated laboratories and equipment was compensated. it appears, by more sincere attempts to learn about the lives of the poor and to look at the wretchedness of their condition that resulted in killer diseases. Curiosity and the need to experiment were also important considerations of that time. Scientists were new to the discipline and had not yet mastered it, to start the manipulations so obvious in the seventies. and eighties. This could have been the result of moral concern or a more humanistic approach.

The independence movement, world war and the general political atmosphere could have diverted the efforts of the scientists to what were seen as the needs of the country, but there was a persistence and demermination to eradicate anaemia. The callousness of the later research is absent, though anaemia must have been uninteresting and unexciting to the whites (as a condition rarely encountered in the West) and the Indians bred in their tradition. In contrast after Independence when anaemia still tops the list of killers during childbirth, scientists are bored with the problem unless it lends itself to molecular manipulation and sophisticated technology use. There is no patience or concern with the lives of the poor, or with the neglect of women, and the environment of infection and infestation. The age of cold hard objective reasoning demanded ruthlessness with the poor. The human angle was side tracked and with that out went methodical epidemeological research. If anaemia has not disappeared with the iron pills — the country cannot stop its march to the 21st century with the electron microscope, ELISA, molecular biology, monoclonal antibodies and so on. "Socio-economic problems are not the concern of the scientists", as one award winning consultant scientist to international agencies remarked. Even technology has not been used for the poor. We have sensitive tests developed to detect diabetes (less than 5 percent have it) inborn errors of metabolism (prevalent in 1 in ten thousand or 1 lakh population), but the method of anaemia detection is the same as that we had in the thirties !

Research today has stepped out of the homes of the poor, by passing the dirty lanes, open drains, concrete monstrosities and smoke emitting factories, straight into the air-conditioned labs and test tubes. Problems that are rooted in an exploitative socio-economic system are sought to be solved from the rarefied atmosphere of the laboratories. Solutions to hunger and anaemia are sought through statistical manipulations of mean and standard deviation. It seems as if scientists are now fighting by proxy the battles of the ruling classes regarding food needs, minimum wages and hunger; their scientific vision can accept strips of data fed into the com-

puter, but not the living, half dead tired women who flock to the hospitals everyday. This myopia seems characteristic of our research today. This mechanical transfer of data reflecting the lives of the poor had occurred in the west almost 25 years ago. India seems to be one of the few developing countries trying to catch up in this field. The price we pay for the use of these advanced techniques is that we loose sight of the human being at the other end. Increasingly we isolate ourselves and our research from the human reality out there. The study of the historical research on anaemia serves as a paradigm.

Anaemia : A Case in Point

In 1915 Dr. A.L. Mudaliar in the Annual Clinical Report of the Raja Sir Ramaswamy Iyengar lying-in Hospital vividly described the clinical picture which cannot be improved any further. "The anaemia of pregnancy is a malignant type of anaemia that seems to be much more frequent than is supposed — it is not only a fairly common complication during pregnancy but is one of the most fatal complications. In 1914 the disease was responsible for 35 percent of the mortality — more frequent in multipara than in primipara, and has a very insidious onset; patients hardly realised the gravity of this condition till the whole body is swollen up and they get an attack of dyspnoea when they seek admission. Breathlessness on slight exertion and extreme weakness are prominent symptoms. An analysis of the blood shows reduction in the RBC - - - - ' (Mudaliar, 1915). In 1927 Margaret Balfour from the Haffkine Institute, Bombay published her findings on Anaemia (Balfour, 1927). This is an important study by a white woman. Her meticulous observations betray her colonial background, but her concern for the enormity of the problem is real. As a woman she is also concerned about the maternal mortality due to anaemia much more than the other researchers of that time. The study is well documented with her starting observations, "In view of the frequency with which the disease occurs in India, it is surprising how little attention it has attracted", a fact which is true to this day. She adds, "This is no doubt partly owing to the fact that little obstetric practice is in the hands of medical practitioners". (Balfour, 1927). It was a period when the medical profession seriously believed that only they could understand problems and change the whole face of society. They feel that the key to the health of the community lay in their hands. Even Balfour identifies her hurdles typically "It is notoriously difficult to get a correct history from hospital patients in India" is her starting shot. The formal training of the doctor was obviously not different then. The framework in which they functioned had nothing to do with the real lives of the people. Any patient who deviated from the textbook pattern of disease was non-compliant or difficult. The woman's real experience of pain and illhealth did not fit into the classical patterns of disease. Doctors expected direct, well-defined, specific answers to their curt questions whereas the woman's understanding of pain was different. This socio-cultural void has only increased with time because today doctors donot even demand answers to questions any longer. They already know it all and have no time to ask the questions.

Nevertheless Balfour's research is exhaustive because she finds that anaemia is not just anaemia but is associated with a host of other problems such as fever 83 3 percent, diarrhoea 38 percent, Albuminurea 30 percent liver enlargement 8 percent, spleen enlargement 18 percent, oedema 100 percent, vomiting 40 percent, sore tongue 31 percent, Epistaxis 7 cases and weakness — always (It is heartening to note that an important symptom now dismissed as "subjective" and "imaginary", was actually elicited and documented). Her startling findings of 42 percent maternal mortality and 53 percent stillbirths led to the recognition of the fact that Anaemia had to be tackled somehow.

Her treatment consisted of rest, diet, iron, blood injections (i.m).,. She also visited the homes of the poor anaemics and attempted to link up the problem with the lives of the women (a rare quality compared with the clinical detachment of the present day doctors). Since the incidence of anaemia was higher among the Muslims in her study she states "—-- The main cause of this is probably the purdah condition under which Mohammedian women live. The poorer classes are confined in a single room where they lead a very inactive life. Hindu women, though under the same general conditions as regards poverty, overcrowding and epidemics, do not observe purdah in Bombay and so have a freer life '. She continues, contradicting herself "-- The Hindu woman does not go out much because customs and habits did not encourage it. - - The work of the home does not require a great deal of activity, especially if it is shared by several women. Modern conveniences also tend to reduce domestic duties (sounds familiar) while modern principles regarding physical exercises and games for women have not yet taken root in India except in a few cases. A generation ago the women of the family ground

the corn daily and fetched water from the well. Now in Bombay atleast they buy the corn ready ground in the bazar and the pipes bring the water to the poor".

These observations betray the prevailing assumptions about women. Instead of recognising that these were much needed conveniences and looking for causes elsewhere she feels that the women had no right to look sick, flabby and unhealthy with anaemia and confuses inactiveness which is a symptom of severe anaemia with the cause.

The major flaw in the study was, however, the fact that only women with haemoglobin (Hb) levels less than 50 percent were considered anaemic. Now the normal Hb level in the West was 14 gms. whereas the normal detected in the Indian poor was between 9.5 to 10 gms. Hence 50 percent (4.5 – 5gms.) of the normal in India was obviously a very precariously low cut-off point. (The cut-off point for anaemia in pregnancy today is Hb less than 11 gms). Obviously the actual incidence of anaemia in Balfour's study was much higher. She had no problems accepting lower standards for Indians. This is true of the other researchers too. They may not have had the expertise then, but they did have the information of higher standards being applied in Britain. They did not find it necessary to question the norms, nor did this upset them. *It is not surprising that science rejected and gave credence to the Britisher's view of the quality of the Natives life. In fact scientists strengthened these myths. To this day Science has fought shy on the challenges of racism, facism, sexism, or social inequalities. It has conveniently toed the line of the dominant ideology and under the garb of scientific truth has disallowed debates and questions.* In fact scientists employed by the government are true, lawful servants ! In spite of Balfour's incidence of 10 to 20 percent (the prevailing figures are 60-70 percent) the high maternal mortality rate led her to postulate a toxic condition associated with pregnancy. She could not demonstrate cure with medicinal iron etc., because we know that treatment for anaemia is very long drawn out.

In the same year McSwiney recorded 43 cases of anaemia (McSwiney, 1927). Unfortunately the hospital stay of the women and treatment was for a few days only, because women came only when they were critical and did not stay long enough to get treated after delivery. She was convinced that follow-up of the patients was not possible as "They were all poor and ignorant folk who became restless after some weeks of improvement and bitterly resented the innumerable injections and demanded their discharge at the earliest moment". McSwiney like today's doctors was unaware that women's labour was needed to run the home and care for the children and that she could not allow herself the luxury of treatment in the hospital ! McSwiney however talks of preventive treatment early in pregnancy to be followed up to term to see whether anaemia could be prevented.

The search for a "cause" of anaemia continued and in the meanwhile experiments on animals were carried out with two diets "a Hindu Diet" and a "Muslim Diet" (Wills and Mehta 1930). But it was too early to ' detect" iron deficiency anaemia by manipulating diets because contributing factors were many including Malaria, Kalazar, Syphilis, and host of other infections

In 1932 A.L. Mudaliar and K. Narsimha Rao from the Government Hospital for women and Children, Madras reported their detailed study of anaemia (Mudaliar and Rao, 1932). Their criteira for Anaemia continued to be (4.5-5.0 gms). But they had made attempts to focus on the multiple factors such as gastric acidity diet infections and others, and postulated the following theories to explain the cause of this killer disease: 1) Infective theory 2) Vitamin deficiency 3) Toxemia 4) Deficiency of Anti-anaemia factor.

A Landmark in Anaemia Studies : 1940s

Upto this point the studies were not organised, but by 1942 L.E. Napier and Neal Edwards published their report financed by the Indian Research Fund Association (IRFA) which was a major document - and has, I think, come nearest to defining the problem (Napier and Edwards, 1942). It dealt with most of the questions including Haematological techniques and included a guide for research and extension work. It is a landmark in the field of anaemia.

Part I deals with a short history of anaemia research in India and it was documented that Dr. V.R. Khanolkar was investigating into the Hb standards in health and disease. The findings of the earlier Anaemia Sub-Committee appointed by the Scientific Advisory Board of IRFA, in 1939 by MI Neal Edwards, V R. Khanolkar and S S. Sokhey was also reviewed, where the major conclusions were that the cause of anaemia is ' common to a large percentage of the population though the dominant cause will be different" and recommended a study of "normal Hb"

and incidence of Anaemia including the effect of treatment. They had also recommended the study of clinical data and diet intakes in pregnant and non-pregnant women during and after pregnancy (Napier and Edwards 1942).

The report also accepted that "In the past anaemia has attracted less attention than it deserved, partly on account of the general attitude of complacency that is adopted towards a disease state not commonly associated with a high mortality and partly on account of a physiological misconception, namely that the normal Hb in the blood of persons living in tropical countries is lower than that of the residents of the temperate climate. The misconception regarding the Hb level in the tropics has now been fully exposed — Anaemia is a very important factor in causing death in infections and other diseases in which, had the patient started with full complements of blood — they would have recovered ..." (Napier and Edwards 1942). At last there was some light at the end of the tunnel.

The report also reviews the work done on pregnancy anaemia. Significant reviews are those of Margarget Balfour where she reported that anaemia was responsible for 61.9 percent of all maternal deaths in Bombay and 35.6 percent in India (Balfour, 1927). Neal Edwards, with data from the Women Hospital gave an incidence of anaemia 49.5 per thousand pregnant women in 1936 (taking Hb less than 50 percent) and Napier and Dasgupta's figures of 158/1000 pregnant coolie women in Assam (Napier and Dasgupta, 1937).

The earlier studies had found that the causes of maternal mortality was in the following order : (1) Sepsis, (2) Anaemia and (3) Eclampsia, and report that among the cases of sepsis which heads the list, there are many cases in which if the patients had not been severely anaemic as well, they would have recovered. (It was also known that in Britain and Wales, anaemia was the cause of only 0.05 percent maternal deaths).

The review of the epidemeological data shows that the associated problems such as fevers, syphilis and other infections were very important and reported that "the discrepencies in the findings of the different observers may well be explained on the grounds that there are multiple causes and that these are not equally represnted in the various series of different observers".

Reviewing the haemoglobin level from various parts of India they seem to miss the important finding related to the socio-economic gradient reflected in the following figures :

	Indian	West
Men	14.5 — 16.0	14.5 — 16.0
Men (Coolies)	12.63	
Women (Students)	13.73	
Women (Middle Class)	12.63	
Women (Coolies)	10.5	
Women (Coolies) (Pregnant)	9.22	

Hb levels in gms/100 ml.

According to the table the poor and specially women were at a disadvantage at the start of pregnancy. This "normal" low Hb levels resulted in anaemia at the onset of pregnancy when the needs are more, and by the end of pregnancy, the condition was so critical (Hb less than 5 gms) that their symptoms were of heart failure.

They were also surprised that the coolie population of both Assam and Shivrajpur in Maharashtra had the same Hb. levels, but less than the Western levels. They at last postulated economic and dietary factors, because in 1936 Napier and Dasgupta had given iron to coolies and raised their Hb to 12 gms and had suggested that there was another limiting factor too (obviously food) (Napier and Dasgupta, 1936). In another experiment by the same authors they found that coolies who were well fed for four weeks before iron therapy showed better responses than those who were not given food (Napier and Dasgupta, 1937 b). The haemoglobin of the well fed group had come up to the levels of healthy men.

Another finding by Napier and Dasgupta was that when the obviously anaemic women had been excluded, the mean Hb was much the same as amongst non-pregnant normal women (Napier and Dasgupta, 1937 a).

Given the limitations of 1942 the scientists were very close to the truth by virtue of their keenness and determination to get to the truth. They were not looking for easy solutions yet. The major findings can be summed up :

(1) that the food intake was low in anaemics; (2) there was a massive hookworm infection; (3) there was inadequate iron intake; (4) Associated infections and other infestations. (Mitra, 1939). They had no knowledge of the following yet because science had yet to unveil some of the mysteries of the cell.

(1) The mechanics of the cell cycle, and haemoglobin synthesis; (2) Need for folic acid and other nutrients; (3) Results of experiments with radio active substances. Inspite of the limitations of that time they humbly accepted the fact that "the essential difference between the study and the treatment of a case in a sanitary advanced country on the one hand and a sanitary backward country such as India on the other is that in the latter one has always to make one's study against a background of widespread infections such as malaria and hookworms, and of malnutrition both general and special Each infection and each food deficiency must be considered as possible contributory factors ... ".

Part III of the report is optimistic because the authors are convinced that anaemia can be prevented and perhaps special anaemia clinics would help understand the "social, environmental and dietary factors ... ". It would also help treatment and research. They felt that the "hit and miss procedures" were wasteful and expensive, and the severe cases were being admitted to purdah hospitals where the facilities were absent and the pathologist who saw the slide never saw the patient. Hence "the background, environmental and personal diet and family customs must be given the same consideration as is applied to the blood slide and clinical findings".

There is a chapter on the details for conducting an anaemia enquiry and research. It is very well thought out with the women as the centre, and not the scientists ego, pet hypothesis or personal ambitions. They suggest that "questions should be intelligently considered and not mechanically noted. For example in a meat eating family the mother who may be the subject of investigations may herself take practically no meat if she eats what remains after the other members of the family have eaten. Similarly lack of sunlight entering a particular room where the woman spends 24 hours a day may be in fact of more importance than the degree of ventilation of the room".

The approach is sympathetic and explores qualitative details beyond the narrow confines of "science" as will be obvious in the more recent work on anaemia. There is another interesting human observation differentiating the moderate anaemia from severe. The authors are surprised and find it worthwhile to document that in "Moderate anaemia" the patient usually makes no complaints and is found on routine enquiry. On enquiry she may admit to feeling tired, but many women expect this in pregnancy and think nothing of it. (Today we have lost even this sensitivity that the medical profession had in 1942 ! It is seen as a subjective symptom and therefore not to be relied on). In severe anaemia there may or may not be presenting symptoms. The degree of anaemia which may develop without symptoms is a testimony to the low standard of well-being with which many women seem satisfied. Questioning will reveal increasing lassitude, shortness of breath, palpitation and swelling of the feet and face ... ".

The recommendations and the propaganda leaflets are again documents with well thought out solutions to tackle the teaching of anaemia and even "A method of haemoglobin estimation should be taught to every midwife ... " has been suggested. They cry out for early detection, and regular examination of the pregnant women.

The propaganda leaflets could be used even today because they deal with the questions of a good diet, special foods, medicinal iron, care and so on and also notes the responsibility of men " ... It is in the hands of the fathers and husbands to take steps to prevent the mother's suffering and ensure their health and safety during pregnancy and childbirth".

This optimism was understandable, because science had opened up new frontiers and the combination of scientific knowledge with the resolve to apply it for the good of womankind made everything seem possible. *The whole attempt appears like a dream today and anaemia still tops the list of killers during child birth followed by sepsis and eclampsia.*

Abortive Search for Quick Cures

Independence saw the report of Dr. S. Pandit published in 1948 entitled *Causes of maternal mortality* (Pandit 1948) — positive report still in the same optimistic mood. But major research bodies like ICMR were not touched by the strong winds of change sweeping the country. There was no sense of urgency, only clinical detachment for the next 10-15 years. Normal levels of Hb were worked out and the role of folic acid and iron confirmed. Instead of getting on with eradication, scientists

betrayed their contempt for the poor people with studies like *Role of rice diet contributing to increased fertility* (Annual Report NRL, 1956). They had jumped on to the band wagon of population control even before they were invited. From this time onwards one finds them bending over backwards to please the powers that be and "science was placed at the service of the ruling classes" even when the rest of the country and the bourgeoisie was talking of plans, people, democracy rights etc. The scientists were not impressed. They had internalised the ruling class contempt for people's lives and food needs and a lot of time was spent looking into Ducks egg protein and its virtues and the role of mothers milk in causing malnutrition. The studies on anaemia were secondary. An important finding in 1956-57 was allowed to pass by because it was not exciting or sophisticated enough (Annual Report, NRL, 1957). It was down to earth and pedestrian. The study showed that iron cooking vessels helped in increasing the iron content of foods cooked in them. Such a study obviously would not lead to international and national recognition and awards, and one could not "claim" anything for this - hence the disinterest. By now research had turned into an industry which could churn out huge spin offs for scientists in terms of patients, trips abroad, publications and awards! The new breed of scientists were not going to settle for simple iron cooking vessels.

A search for a miracle and a quick cure was launched to put an end to the nagging problem and to claim credit for having wiped out anaemia. The environment, foods, infections, poverty had to be bypassed, "All that takes time" as one of them exclaims. In the sixties sketchy details of iron needs were worked out by simple additions of the need during pregnancy, lactation, menstruation and by 1969 Dr. C. Gopalan announced the findings that iron and folic acid would be distributed all over the country as a National programme (Gopalan, 1969).

He said "Till such time as we are able to bring about a significant improvement and diversifications in the dietaries of the poor sections of our population, the *practical* (emphasis mine) answer to this problem must lie in the systematic distribution of iron to our poor pregnant women through MCH centres and PHCs". (Note the significant patronising tone!) Even this is recommended in the latter half of pregnancy because "A significant proportion of the poor pregnant women can be reached only in the latter half of pregnancy". The researcher's pragmatism must be appreciated along with his candid confession! This reflects how the researcher has stopped identifying with the subjects of research and has instead objectified them. By 1970 Dr. Gopalan even announced the well worked out doses of iron to wish away the problem of anaemia from all segments of the population (Gopalan 1970). Dr. Gopalan was of course oblivious of the problems of long distance storage, distribution, lack of commitment of the staff, the felt need of the women, the massive problem due to inadequate food, overwork, infection and anaemia was reduced to a farce, by the pill. It was not the fault of the women that it did not work. Any wonder it has not even been evaluated!

In the meantime the WHO in 1968 had recommended fortification of food with iron, one of the exciting new suggestions that would increase iron in food, and do away with pills (WHO, 1968). Hence work was started at the National Institute of Nutrition to identify the chemical composition of an iron compound that would mix well with common salt (which is consumed by all). The research was time consuming because the hurdles are numerous. The drug (tonic) industry watched this progress with apprehension but they need not have feared because since iodine fortification of salt in the goitre area had been a failure - it was a foregone conclusion that this research would remain a curiosity until such time as the system became really concerned with the poor.

Upside Down Research : 1970s

In the seventies it was forgotten that anaemia was still a killer, it again became an "exciting problem" and gained fresh recognition. Anaemia means less blood, less oxygen and (?) alteration in utilisation of food for energy for work, with many other associated changes. Hence while the researchers now marked time waiting for anaemia to disappear, their curiosity was raised with questions of anaemia and immune response, anaemia and work output (we had studies on the same plantation coolies in the Nilgiris by Dr. Rahamatullah, who made anaemic women (Mean Hb. 6.2 gms.) work and calculated the increase in work after they were given iron (Rahamatullah, 1983). There were also studies of alteration in the immune response in anaemics, and other molecular level changes such as changes in enzymes functions.

In the meantime by the late seventies when anaemia could not be wished away nor used for "exciting" research we have a breed of scientists

who were willing to flog a deadhorse—the pay offs would be recognition, awards etc. It was obvious that anaemia had to be presented differently. Hence statistical jugglery was resorted to in thousands of anaemics showing that anaemia had a role in prematurity, stillbirths, abortion, IUCD, Pill use. maternal and child morbidity, toxaemia, body weights, arms circumference, skinfold thickness, sore tongue etc. Research had now been turned upside down. (Ann. Reps. NIN 1979-83) *The causes of anaemia were no longer important — the correlations with absurd parameters started, and by a process of elimination the researchers arrived at the "Risk Care Approach" a bastard of the eighties* — an attempt at planning for the 21st century by efficient and smooth salesmanship based on statistical manipulations (ICMR, 1985). It states that indices of MCH care like low birth weight and prematurity rates — have not shown the decrease commensurate with expansion of health services — an attempt to cover the entire vulnerable population (pregnant and lactating women, infants and children) with the available limited health man power — might have prevented effective functioning and resulted in lack of perceptible impact ... and "Dealing with problems of large magnitude with available limited resources, adapting a risk care approach might pay higher dividends —''

The health care system was now using the language of the stock exchange. The philosophy being that since only a small section of women are really in the "risk group" — contributing to mortality, the others may be in the border line — and never mind about them — they should be identified and treated. There is no concern for the quality of life, the nagging tiredness and the inability to work. Further it is felt that in the rural communities it is not possible for the doctor to visit far flung areas and hence one must find out the minimum number of antenatal visits needed. (Ann Rep NIN, 1982).

By process of statistical elimination the following women are placed in the "Risk Group". Hb - less than 8 gms Wt - less than 40 kg; Ht - less than 140 cm. Any other problems during the earlier pregnancies.

Other scientists impatient with the slow progress of the tablets devised ingenous methods of injecting the whole dose of iron into women (who had Hb less than 8 gm.). Exploiting the popularity of injections in our country, scientists recommend large scale injections of iron to overcome the non-compliance of the patients and cover up thus our lack of will and perseverance in tackling the problem of anaemia. (Note the similarity to the use of Net-en in F.P. Programmes).

Considering the huge government funding that goes into research today, the question that faces us is one of ethics What is the researchers' responsiblity to society? What are the attitudes and assumptions that should inform his/her research? Is s/he justified in sacrificing even scientific rigour to expediency. Should not a sense of humility underline every piece of research undertaken and attempts be made to make it relevant to the needs of the people? Today the role of science in solving the problems of the people is being increasingly questioned. If the scientists do not recognise how enormously privileged they are at the cost of the country and attempt to fulfil even the limited tasks before them they are in danger of rapidly becoming redundant.

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SOCIAL DYNAMICS OF HEALTH CARE

The Community Health Workers Scheme in Shahdol District

imrana quadeer

The Community Health Workers Scheme was introduced ostensibly to promote people's participation in the delivery of health care. The scheme did not however envisage other changes in the health infrastructure or incorporate new developmental strategies. The article examines the impact of the rural social and economic realities on the scheme in Shahdol district of Madhya Pradesh where it was introduced in 1977. It shows that the prevailing network of linkages which serve only to increase and strengthen the hold of the elite, have fully absorbed and distorted the scheme. The poor who were the supposed beneficiaries, had no say in either the decision-making or the running of the scheme. The author concludes that in the absence of efforts to either change the social matrix or at least control some of the key components, schemes such as this one are bound to fail.

The Community Health Workers (CHW) Scheme was introduced to the Indian health services panorama with many promises. It was to promote people's participation, provide health care to the poor and deprived rural population, and be the vanguard of Primary Health Care in the Indian setting. A constant refrain in the planning process was the need to revive self-sufficiency in Primary Health Care and make it a part of the broad developmental process.

The scheme however, was introduced without any significant changes in the health service infrastructure which was to support it. It simply took over the responsibility of implementing the existing health programmes without any review of priorities and the technologies used. The general developmental strategies remained as stagnant as ever and above all - despite all the laudable objectives - the rural population was treated as one homogenous mass without taking into account the reality of social classes and their dynamics. The implications for the working of the scheme were quite serious. This paper examines the impact of the rural social and economic realities on the working of the scheme. It is based on a part of data collected for a study of the CHW Scheme in the pilot blocks of district Shahdol in Madhya Pradesh. The research team consisted of three research investigators.

Methodology

Our hypothesis was that the Scheme's actual performance would be determined by the nature of social dynamics in the area and the official efforts made to overcome the constraints imposed by these dynamics. The aspects that we focussed upon were : (a) Social and economic stratification of the rural population; (b) the links of CHWs with the village strata; (c) the links between strata which indirectly influenced the behaviour of its members; and (d) the links with the personnel of the health services.

These were the areas which we explored through observations, interviews and group discussions with people of different strata, the CHWs and the PHC staff.

The study population consisted of the first pilot Block selected for the implementation of the CHW scheme. This Block had a population of 39,642 with 109 villages in all.

General surveys were conducted in 34 villages from where CHWs were selected and in 4 villages which did not have CHWs. These surveys were used to understand (a) the socio-economic background of the villages, (b) to explore the views of village residents regarding the scheme and their CHWs, (c) to collect information about the CHW, and (d) to assess the status of other developmental programmes.

For the purpose of this survey, two strata were identified : the "elite" who were defined as the surplus producing farmers,[1] regular government employees, and those who held official positions of Sarpanch or Upsarpanch; and the "poor" who were the marginal or subsistence farmers and the landless labourers. From both the strata, a 60 percent purposive sample of households was interviewed singly or in groups. The total number of households in the villages covered was 3,743 and their population was 20,534. Out of this the sample covered 19[illegible] elite and 2194 poor households. The malaria worker's house list was used for the purpose of identification and 1 to 2 days were spent in each village by the three investigators.

In six selected villages where the 'best'[2] CHWs resided an intensive survey was carried out. About one-two months were spent in each village. For this in depth study three strata of households were identified based on landholdings and employment. These only roughly coincided with what we considered well-off households, subsistence farmers, marginal farmers and landless labourers but they sufficiently reflected the economic stratification of the village population.[3] The categories were of households owing 0 to 5 acres of land, more than 5 to 10 acres of land and more than 10 acres of land along with those having permanent employment in the government services (Table-1).

The intensive study provided qualitative data on socio-economic aspect of village life, health and health care services, developmental programmes, CHW's work and popularity, and his interactions with PHC personnel as well as the people. For quantification of some of these, an interview schedule was administered to a 30 per cent stratified random sample of households.

In addition to these surveys the PHC personnel were observed and interviewed in detail regarding their views and support to the scheme. This was cross-checked with the CHWs as well.

The Pilot Block and the Socio-economic Back ground of it's People

Covering an area of 5125 sq.km., this Block retained parts of the forest which covered the entire district 30 years back. It had 19 panchayats (all Reserved) and 109 villages. Except for one railway line and two metal roads which cut across the Block, its transport was mostly through mud roads. It had a coal mine, and a thermal power station was being proposed within its boundaries. The Block had a higer secondary School, 72 primary schools and 10 junior high schools. Its tribal population was 25,704 and scheduled caste population was 1830.

Size and Social Composition of Villages Surveyed

All the villages were predominantly tribal. They could be grouped into 12 villages which had a few Scheduled Caste households (group I), 15 villages with 1-2 households of the Hindu upper castes (group II) 7 which had 10 percent or more households belonging to the upper castes (group III) and 4 where the muslim population was significant (group IV).

Although these villages were commonly referred to as tribal villages, they could be called tribal only to the extent that the majority of their residents belonged to one tribe or the other. The organisation of these villages, their economic relations and their social rules had little which could be called exclusively tribal. The small minority of non-tribals in the village maintained a posture of superiority and freely referred to the adivasis (tribals) as "Stupid' and "lazy", and blamed their character for their impoverished living conditions. A slightly deeper look into the dynamics of these villages, however, brought out the real mechanics of these characterisations.

Economic Stratification

Estimation of households owning 0 to 5 acres of land (poor) and those owning more than 10 acres of land or employed (well-off) gave an idea of the economic stratification in these villages (Table 2).

The stratification, seen against the social background of the villages, brought out some interesting features of socio-economic patterns. Six out of the seven villages of group III had the largest numbers of well-off farmers. Most of these villages were also the larger villages of the Block which were well-connected and provided employment to a significant percentage of their own population. Secondly, employment in the colliery was a significant reason for the observed percentages of well-off households in all villages, especially Group I and Group II villages. Villages of Group IV alone had no such households. Most of their Muslim and tribal inhabitants worked as rickshaw-pullers or as wage-labour in the nearby town.

Another striking characteristic of the pattern was that percentage of households owning not more than five acres of land increased from Group IV to Group I. It was also evident that the non-tribals generally constituted the bulk of the well-off farmers or the employed residents of the village whereas the adivasis were the poor, landless, or marginal farmers. Though all non-adivasis were not always well-off, invariably the Brahmins, Thakurs and Jaiswals, if they did not have sufficient landholdings, had the few available government jobs and had captured whatever other employment opportunities existed in the area.

Yet another feature that emerged was the large number of poor and ill-fed people in spite of a significant number having land. Only in 19 villages the percentage of landless was 30 percent or above. Thus, having land was not necessarily a guarantee against poverty. It was not uncommon to find

households who owned land but had no means to use it. Often the land was too difficult and unproductive to labour upon. So they preferred to do wage labour rather than toil on an unpredictable piece of land.

The Web of Life

The pressures of production processes knit the people to gether into a web of social relations the terms of which were determined by the nature of production, the intensity of needs, and by the paucity of economic alternatives in and around the area. Agriculture was the major activity binding people together. The marginal and poor farmers owned 1 - 5 acres of land and were able to produce grain which sufficed for 2—6 months. Together with the landless they constituted 31-80 percent of the surveyed population. These farmers depended upon their labour to earn for the rest of the year. The subsistence farmers were those who owned land and could produce enough for the year with family labour alone. The rest we called middle farmers or the well-off farmers who employed labour and also managed to produce some surplus. They constituted 0—45 percent of the households.

The forms of labour exchange varied from fixed period contracts "Harvahi", daily payments in barter system "bani mazdoori", to free use of the plough for two days in exchange of five days of labour "Podika", and loaning of bullocks for a season in exchange of grains. The wages were either two kilos of paddy or Kodu a course grain daily or 240 kilos of paddy or Kodu for four months of Harvahi. Sometimes, instead of this, the Harvahi was given 12 kilos of grain to sow on a piece of land. The produce was his except for the land rent that was deducted. Yet another form of exchange was working free of cost for each other at the time of sowing and harvesting, a practice most common among poor and marginal farmers. Wage labour was uncommon and money as payment was offered only by farmers who were essentially colliery employees. Very often even these terms were not available to people who then depended upon collection of forest produce and fire wood.

The subsistence farmers using family labour just about managed to eke out a living. Their sole concern was to remain operational and they consequently tended to keep aloof, being always on the look-out for odd jobs to supplement their income.

The artisans were few (Basorth, Agaria, Chamar, Lohar and Kumhar castes). Their trade was dwindling in the face of competition put up by the growing industries. Many did wage labour and farming as well or had completely shifted over to these.

The non agricultural labour was yet another cog in the wheel, exploited both by the contractors and government agencies. Paid around Rupees three a day in spite of the existing minimum wages, the labourers had to seek employment with these very exploitative agencies because, firstly, the contractors and private businessmen were hand in glove with each other and secondly, there were no other alternatives.

Through these working relations, the poor found themselves entangled in an exploitative network but knew of no ways to get out of it. Even though the well-off farmers were unable to provide work to all who needed it, they wielded power through their ability to provide odd loans (of seed, grains and money) and "sifarish", (influence).

The well-off were thus left alone to make their own profits, not just through land but through most of the administrative agencies which existed in the area and which were supposed to deliver help and relief to the poor. One example of this was the Panchayats, which worked as tools to soak up public resources for private purposes. The Block Development Officer worked through them and through the village elite and so managed to reach only a small section. The elite used their sources and their contacts to exercise their own power and to consolidate the conditions of their own family members. As a matter of fact, the word 'elite' in the context of these 38 villages is a misnomer. What we really had was a handful of not-so-affluent families who, either because of their caste Hindu background and past power, or because of their land holdings, had acquired respectable positions. 'Respectable' because they were the ones who entertained, hosted, and informed visiting officials, police personnel, and, at times, politicians, and they were the chosen few for delivering to the people whatever the Block administration had to offer. The intensive study showed that only a few in category III performed this role.

It was not uncommon to find that in these villages the lowly paid but most sought out positions of CHWs, Adult education tutors, and Rahatkar relief work mates had been captured by the same persons belonging to these families or the family of the Sarpanch or different members of his

clan. It was here, then, that caste and family loyalties began to influence the economic relations. The opportunities were few and unemployment vast. With the majority of adivasis being unacquainted with laws, rules, and functioning of the administrative system, it was not difficult to usurp (with the help of higher officials) what was meant for them. Still better was the practice of including one or two of them, giving them a few crumbs, and getting their thumb impressions on the official papers. The divisions within the adivasis and the influence of Hinduism, which had brought in with it the concepts of superior and inferior tribes, helped to ward off any dissent. The Raj Gonds, who considered themselves Khsatriyas (Thakurs) through their social superiority as well as land ownership, were the closest to the bureaucracy.

The landless and poor lived in fear of the local administrative machinery. In the event of an encounter they would rather let the 'Bare log' (big people, the rich) of the village play the intermediary than face them on their own. It was a common practice to pay the Sarpanch to get one's work done rather than do it oneself. The officials, however, perferred a system of direct payment. The police and the Patwari were the two most feared officials. Every village had people complaining of land disputes where, simply because they could not pay them, either their land was transferred to others or they were threatened with 'benami'. The experience at the Tehsil office was no different, where every clerk wanted his pound of flesh. If any one tried to bypass this system he either never got his work done or he was so entangled with the "rules" and "laws" and all the loopholes that go with them that he was left utterly bewildered. It was basically to avoid this unfamiliar world of "Kanoon" (law) that the people were forced to part with their hard earned money. It was no wonder that they were mortally afraid of the "Sahibs".

The petty traders who brought off the produce of the farmer or their forest collections were another link in the chain of exploitation. Since people needed oil, salt, clothes, and other necessities they had to exchange some of their produce for money. This exchange occurred at harvest time when grain prices were lowest and the poor farmer invariably lost in this exchange. He in fact lost twice because, soon after his own stocks finished he had to go back to the same traders who now sold him his grain at double the price. Similarly, the forest produce collected by the villagers were bought at throwaway prices and the same were sold at 200 percent profit in the market.

Introduction of the CHW Scheme

It was within such conditions that the CHW Scheme was introduced in the Block from 2nd October 1977. The implementation was done in a hurry. The PHC staff had only a week to inform panchayats, do the propaganda in the villages, complete the formalities of selection and make logistic arrangements for the training programme. The staff had severe reservations about the principles of the scheme (that health care through non-professionals is possible) and the abilities of the local population. Also, they were reluctant to take any additional work responsibility so they followed the dotted lines of the state circulars and did not bother to take initiatives in preventing the selections from being distorted by the existing power balance.

Selection Procedure

The result was that the selections were left to the discretion of the panchayat and therefore, effectively, to the whims of the Sarpanch or the Upsarpanch. In the majority of the panchayats, neither were all panchayat members contacted, nor all villagers were informed. Only those applicants were encouraged whom Sarpanches favoured. Very often the PHC in fact strengthened the hands of the Sarpanch in selecting undesirable candidates due to caste, class, and religious links and justified themselves by saying, "if others are doing it why shouldn't I". For 40 positions only 54 applications were forwarded, of which from 30 villages single applications were received. In ten villages the tie was either between members of the elite (mostly non-tribals) or among the many relatives of the sarpanch. In two cases rejected candidates were finally accomodated by creating new village clusters for them. This showed that not only the supervising staff but also the doctors and the Block Development Officer participated in the manipulations. According to some of the PHC staff members, "most of the Thakur and Brahmin candidates were no good compared to some adivasi candidates. But the lower educational level of the latter were used as an excuse to reject them". They felt, "relations and connections were more important than qualities" and said "the discretionary powers of the selection board always favoured the elite".

Of the 36 CHWs interviewed, 22 said they were informed by the Sarpanch about the scheme, 12 said the PHC staff told them, and only 2 had heard

of it from their friends. Invariably, those called by the Sarpanch were asked to apply for the training. None was told to inform others.

The general survey as well as the intensive study revealed that the majority of the people had no information regarding the scheme in general or the selections in their villages. This was particularly so for category I where 88.2 percent expressed no knowledge of selections (Table 3) Among those who expressed knowledge of the selection process, none thought it was their responsibility also. People considered Sarpanch or the hospital to be responsible for selection of CHWs in 45-50 percent of the households.

Background of CHW

Sixty percent population of the block was of scheduled tribes or castes. Despite this, of the 37 CHWs selected, only 20 were from adivasi households and none from the scheduled castes. The reasons for such distortions began to unfold when we looked at the socio-economic backgrounds of these CHWs.

Social Background : The majority of the CHWs were Brahmins and Thakurs among the non-tribals. Even the lower caste Hindus had a very marginal representation (Table 4). It was revealing that the tribal CHWs came largely from those villages where the entire population was either tribal or some lower caste Hindus lived there. In those villages where 10 percent population or more was caste Hindus or muslims, invariably all CHWs were non-tribals. Even in those villages where only 1-2 caste Hindu families resided 53 percent CHWs were non-tribal.

Our data further shows that except for seven CHWs who were not related to the Panchayat members, all others either had links with past or present panchayats or were themselves Sarpanches or Upsarpanches (Table 5). These links were common to adivasi and non-adivasi CHWs and indicated close-knit elite groupings whose members kept interchanging their positions in the power capture game. Yet another link of the CHWs was with influential families of their villages (Table 5c). If we take this into account then even out of the seven CHWs we are left with only four who could claim no links with the power elite !

Land Holdings and Occupation The land-holding pattern of the CHWs was very different from that of the general population. It reflected their links with the landed sections (Table 6). It also brought out the differences between the tribal and the non-tribal elite quite clearly. Not only the tribals owned comparatively less land, their families alone depended upon wage labour. Only three out of 20 tribal families had an employed member while among the non-tribals six out of 16 had employed members.

The CHWs themselves had varied occupations in addition to their health work. Eight did farming also, four were big contractors, and four had become professional practitioners of sorts. Eight had managed to get the supervisor's jobs in relief projects while two had become tutors in the adult education scheme. Another three had managed to get both these jobs at the same time while the remaining seven did odd jobs like taking contracts for bidi leaves, shopkeeping and so on. The relevant fact is that the 17 who owned over 15 acres also held the most paying occupations like contract work, professions of sorts, and large farms ! Also it was significant that, despite a scarcity of jobs, this small group had managed to acquire multiple employment.

Education and Age Twenty percent and 30 percent of the adivasi CHWs were high school and middle pass respectively as against 41 percent and 47 percent of nonadivasis with similar achievements. The low achievements of adivasis only underlined the irrelevance of making middle school a criteria for selection.

The desirable age of a CHW was to be over 25 years of age. In this Block however, twenty three (64 percent) were under 25 years of age.

Performance The general survey data helped to group CHWs into four groups based on people's responses. Of the 34 villages, in 15 the elite as well as the poor talked well of their CHWs, in 4 the elite talked well but the poor wer divided, in another 12 the poor as a whole were dissatisfied, and in three both categories of households were dissatisfied.

The elite, despite their satisfaction, said that the CHWs were useful only for minor illness. They were neither aware of the scope of principles of the scheme nor of the duties of CHWs. He was considered a paid PHC employee. The non-tribal elite were often patronising towards their tribal CHWs. For example, they commented, "He is the only educated one among them and education has put some sense in him"; "The poor fellow can treat only according

to his intelligence, how can he go beyond"; or, "The boy is sincere, he always comes to ask if any thing is required". For the non-tribal CHWs however, the tone changed to "He is very intelligent and we hope that he would be considered for more than just a Swasth Rakshak". "He does so much more than the health worker and is still so poorly paid"; or "The non-tribals have done well in all spheres and CHW is no exception". The well-off tribals, on the other hand, were protective about their own tribal CHWs and even tried to cover up their faults, but if they had a non-tribal CHW, they were cautious and respectful and talked in appreciative but subservient tones of the 'Bhaiyyaji' or 'Babu' (big brother).

In villages where the poor were divided in their opinions the population was generally mixed. Here the social group to which the CHW belonged invariably favoured him, like in villages Medki, Dhawrai and Khickkiri. In Badwahi the Brahmin CHW was unpopular among all the tribal poor except for the Baigas who expressed satisfaction Baigas also happened to be a landless majority who worked for the Brahmins and were almost bonded to them as labourers.

According to the poor the CHWs charged for giving them drugs and often even for chlorinating wells They said that instead of visting the houses of the poor the CHWs preferred to go to the nearby villages where they could practise easily. The Harijans complained that their houses were never visited, "He is for the 'bare log' and not us", "We dare not ask for help, if he gives something it is our good fortune but there is none with such a fortune". Despite their views this section of the villagers was keen not to get into trouble for talking, "We don't want any more trouble".

In villages where the CHW did not reside, people were familiar with his curative functions but had not seen their CHW for months together. When people's views of their CHWs are seen against the data on the CHWs' socio-economic backgrounds, some of the trends that emerge are revealing. All CHWs who were given satisfactory rating by the poor as well as the rich were tribals except for 1 out of 15 in this group. On the other hand, those who were not liked by the poor but liked by the elite were non-tribals mostly, 9 out of 12 CHWs in the group. The distribution of tribal : non tribal in the other two groups was 2:2 and 1:2. Given the distribution of villages, it naturally follows that the popularity of CHWs among the elite as well as the poor was higher in purely tribal villages (58.3 percent) where CHWs were also mostly tribals, whereas their unpopularity among the poor alone was higher among the mixed villages — 8 out of 12, i.e. 84 percent villages, where most CHWs were non-tribals.

In addition to the findings of the general survey the intensive study of six villages brought out the following significant findings.

Nature of Services Provided by the best CHWs

These CHWs were considered helpful by the people. However, their performance over the year had declined remarkably. Thus in the villages where they did not live they had stopped paying their usual visits or they went only once or twice a month. In the residential villages also, people felt that the CHWs initial enthusiasm had died down. Even then they agreed that the CHWs did help in illness. Their utility in minor illness was acknowledged but there was a significant difference in the response of the three categories.

Allopathic treatment was used alone or in combination with other forms of treatment by 55.0 percent, 76.8 percent and 92.2 percent of the households in category I, II, and III respectively. The reasons for this difference were more economic rather than a matter of preference. An important fact was that the CHWs were the source of allopathic treatment (alone or with other sources) in 39.0 percent households of category I and 26 percent in category II and III. Apart from this higher dependence of the poor on CHWs, it was also important that the poor combined CHWs with traditional healers and the well-off with hospitals ! (Table 7.)

For major illness the use of allopathy was markedly higher in all categories (80 percent or more) but the use of CHWs was much less. Even then, out of all households using allopathy, the highest use of CHWs was by category I (40 percent), the lowest by category III (14.8 percent). This was an interesting finding which indicated that the poor now had health care facilities which they did not have before. The information on the CHWs' preventive activities, their free accessibility and their practice patterns however, reveals the nature of this success.

CHW's preventive activities in the area of chlorination of wells, maternal and child health, education and environmental sanitation were almost negligible. Only 31.7 percent category I households (as against 0.9-2 percent of the first two

categories) said CHWs chlorinated wells in their houses and even they were not aware of their other activities (Table 8).

In the beginning the CHWs used to visit different areas of their residential village and the villages alloted to them but this had now become a rarity. People now had to request them to see a patient. Though these CHWs helped according to most people, 29 percent households in category I said that the CHWs refused to come and see a patient. Also, 28 percent of the poor said that he charged for injections - indulged in private practice - as against 16.7 percent and 3.9 percent in category II and III (Table - 8). In addition, in case of major illness, even category I households paid in 84 percent of illness although they used CHWs to the maximum 40 percent This indicated that though the CHWs were mainly used by category I, the trend showed replacement of the "traditional Gunia" a by a "modern Gunia" rather than emergence of self help and self-sufficiency.

Supervision : The scheme envisaged supervision by the community in administrative matters and the PHC in technical matters. However, high percentages of households in the first two categories said they knew nothing about supervision (Table - 3). Even those who mentioned panchayats separated themselves from the responsibility since there was no identification with the panchayat at all. The Sarpanches themselves were least inclined to be active in this aspect. In fact since they were a party to the selections and mostly related to CHWs, even in cases where people were unhappy they found no reason to act against the CHW's interests. Of the 19 panchayats, none had taken any action against any CHW at any point of time nor made efforts to stream-line the CHW's activities.

Five CHWs were themselves Sarpanches and Upsarpanches and they said that their panchayats had no directives about the panchayat's supervisory responsibilities. Even among the CHWs, only 3.5 percent had heard of the panchayat's supervisory role.

The technical supervision by the PHC staff was more a bone of contention rather than an asset. The Health Workers attempted to pass on their work to CHWs, boss over them and treat them as subordinates. The CHWs resented this once they realised that the PHC workers were more interested in private practice. Some were also able to retaliate given their social status and acquaintance in the village. The extent to which this conflict developed was largely determined by the socio-economic backgrounds of the CHWs The non-tribal CHWs were assertive, dominating and socially powerful. They either cared little for the paramedical workers or were treated well by them out of sheer desperation. Among the tribals, the resourceful CHWs (Sarpanches or well off) managed better since their local status was important but the others fared poorly. They were not only not given any help by the various PHC workers but also treated with much contempt.

The role of the senior staff at the PHC and district levels was not much different. All the doctors and most of administrative staff came from non-tribal caste Hindu backgrounds and had their own views of the social reality. In their busy schedules of working for Family Planning programme, Rahatkars, office administration, and looking after the 'VIP' visitors, the District Health Officers' only contact with the people of the area was through their private practice. For them the 'locals' were a mass of backward and unintelligent humanity with whom it was difficult to communicate. Condescendingly, the DHOs let the PHC medical officers handle the scheme. They themselves were hardly familiar with it. According to the two consecutive DHOs, 'What can these untrained locals do; let them atleast help our health workers". For them even the village Mukaddams and the Sarpanches were "unintelligent people". Given the choice, they were for closing the scheme any day.

At the PHC, except for one medical officer (out of four) all the rest were either indifferent or vocally against the scheme even though they agreed that the CHWs were giving some help to people where their own workers had failed. Interestingly enough, all these medical officers used the CHWs influence to get referred cases for their private practice. This link was strong and in return some CHWs were patronised by the medical officers. Their usual answer for letting things pass was, "we have no control over the CHWs and the Panchayat doesn't act. Even if we report something there is too much political interference and we know that except for getting unpopular we won't gain much".

Discussion

Our data projects a pattern of social reality wherein a handful of the non-tribal elite in collaboration with the well off tribals controlled the majority of the poor — individually through terms of work and collectively through social institutions like

panchayats. Both tribal and non-tribal poor had little access to the Block's developmental agencies. The areas general backwardness precluded alternatives to the existing pattern of living. Further, there was a general lack of information and education and the interaction of the majority of the poor with the outside world was extremely restricted. This meant that their dependence on the elite and the dole provided by the state was total. As a result, the two in collaboration got away with many acts of ommission about which the people may know but could do nothing.

In such a setting, the exercise of giving "people's health in people's hand" through their 'elected representatives' may sound good on paper but is bound to get mutated by the social matrix within which it is placed. This is what happened to the CHW Scheme in Shahdol. Though officially it was a voluntary scheme, a scheme of the people, it continued to run — despite reminders from the state — as yet another of the government's unsuccessful schemes.

The relevant aspect of the problem is that though the scheme did not work according to plans, the CHWs did cater to certain needs of the village population. It is thus apparent that while the explicit design of the CHW Scheme had not worked, there was an implicit design to its functioning. This design can only be recognised when we look at the linkages of the CHWs with the other categories, as suggested by the hypothesis of our study.

Links between social classes

The influences of the existing socio-economic configurations on the working of the scheme are clearly visible through our data. The supremacy of a small group of landed elite who controlled the local resources and also the channeling of government funds, created a situation wherein the appropriation of resource and labour had become a part of life. The CHW Scheme provided employment and therefore could not escape the general trend. Appropriation of opportunities provided by it not only brought economic assets for the local elites and their families but also an opportunity to strengthen their social positions by favouring some who mattered. The undemocratic functioning of the panchayats only made the task easier. Following the initial grabbing of positions however, the enthusiasm reflected by the panchayats dwindled into apathy and disinterest when it came to supervision and control. In other words, after providing patronage to their favourites the panchayats resumed their usual slumber.

It is also important to realise that the Panchayats could get away with this usurpation of the scheme only because people were in no position to protest against those who controlled the implementing institutions, given their social and economic as well as political dependence.

Given the domination of a small section of the population, there was no social pressure on the selected CHWs. Those who did work had their own motives. They were either interested in building their social images or were politically motivated (as the CHWs of Gijri and Varamtola) or had monetary interests. They some times augmented their 'salaries' (honorarium) through indulging in private practice and nobody objected to it. Even those CHWs who were considered good by all showed preferential treatment towards category III households. They charged them less frequently, were readily available to them, and also provided some preventive services however meagre those may be. But the CHWs relationship with the well-off was contradictory. While they served them well, they were used less frequently by this section and only for minor illness. In return for their services though, the well-off protected and praised them and thus ensured the high cost of medical services for the poor.

The CHW in general knew that if they could humour the well-off they would be free to handle the rest the way they wanted. This trend of ignoring the poor was so dominant that even those few CHWs who came from the poorer families often tended to ignore their own kind and over a year, had learnt to reproduce the behaviour patterns of their better-placed colleagues. Thus, they were either practising in their own villages or going to areas where no CHWs were posted and the people knew nothing about the scheme so that they could sell the medicines with ease.

Despite their ambiguous beliefs the majority of the poor opted for allopathic treatment if they could afford it and had also realised the importance of chlorination of wells and vaccinations. In procurring these services however, the people had learnt that money, connections and 'sifarish' were the tools that worked. Voluntarism on the part of the provider and organised demand on the part of the recipients had not been a part of their experiential base as was clear from their experience

of the political processes which moulded the administration of the area.

Links of CHWs with Social Class

Yet another crucial link was between the CHWs and the existing social classes. This was responsible for the quality of selections as well as work of the CHWs. As we have seen, only 4 out of the 36 CHWs could be said to represent the average villager. The rest had their connections with the present or previous office bearers in the Panchayat or came from the better-off families possessing large acreages of land or other business. Since this section of the village population appropriated all resources coming for rural development the CHW scheme was also appropriated. This explains the atypical background of the majority of CHWs as also their ability to acquire other employment. Consequently, not only were there a large number of non-tribal CHWs but the quality of their work in general was affected in several ways.

Firstly, since the CHWs were given the protection of the elite they could do almost what they wished without being answerable or accountable to anybody. In turn the panchayats, the statutory body responsible for their supervision, took no action against them.

Secondly, since the CHWs joined the scheme as a means to augment their income or status they concentrated almost entirely on curative work. Whatever little preventive measures they implemented in the beginning was also given up over time or else they would even charge for chlorinating wells.

Thirdly, since income generation was possible only through charging for their services and furthermore, since they could not very well charge those elite families through whose benevolence they had become CHWs, the brunt of paying for their practice was borne by the poor. Additionally, it should be remembered that the poor had no one else to go to while the well-off preferred to go to alternative health facilities like doctors and hospitals — particularly so in case of major illness. This explains the paradoxical situation of the poor using the CHW more and paying more too.

Fourthly, most of the CHWs were appointed through the agency of the Sarpanch or Upsarpanch but once they themselves became familiar with the bureaucracy and the government officials they began to develop their own alternative income sources. Thus, the post of Sarpanch would become far more lucrative as would the positions of Rahatkar mate or petty contractor. As a consequence, these alternatively more profitable occupations would demand more of their time and energy and the quality of work in community health would decline. Even the house visits being done initially would stop.

Fifthly, even those few tribal CHWs who came from poorer families were drawn into the search for better incomes and thus began to ignore their own social strata. It would be unrealistic in such a context to expect them to remain devoted to the cause of the poor.

Links with the Health Bureaucracy

The notion of their own social and technical supremacy generated a feeling of contempt for the CHWs among health workers at various levels of the health services hierarchy. The result was indifference, condescending tolerance, and disinterest among the senior officials, and jealousies and resetment between paramedical workers and CHWs who had captured the clients of the field workers and had now replaced them as doctors!

The health and welfare bureaucracy did nothing to reverse these trends. Given their own needs and links with the local elite they only used these patterns for making profits. They in fact, often protected the defaulting CHWs and never made efforts to streamline their work by either putting pressure on the panchayats or their own organisation. In the process they only reinforced the existing patterns rather than improve them.

Conclusions

Given the indifference, inefficiency and ineffectiveness of the health bureaucracy, the powerful hold of the elite, and the collaboration of the well-off tribals as well as the administrative bureaucracy of the district, the prevailing network of linkages had fully absorbed and distorted the CHW Scheme. The poor, in whose name the scheme was launched, were made to pay heavily for receiving some medical care while they had neither a say in decision-making nor a hand in the running of the scheme. It is a paradox that the well-off, who used the CHWs the least, were also the ones who were bestowed with the CHWs' attention and the poor, who used them the most, had to beg, plead, and wait. This 'success' that the scheme boasts of is certainly not an achievement but a reflection of the dire need of the toiling people.

Our study concludes that people's participation in a health care scheme cannot be an isolated event. The degree of participation (or non-participation) is determined by the overall socio-economic relationships which bind a population and within which all schemes have to function. It is these links with the larger system that decide the success or failure of a scheme. Though confined to a Block, our study identifies the social linkages which influence the scheme and underlines the fact that it is the nature of these linkages which is crucial for the scheme wherever it is introduced.

The experience of Shahdol teaches us that in the absence of efforts to either change the social matrix, or at least control the key components influencing the scheme, or offering people a taste of free preventive and curative health care services, to expect that people will hail the CHW Scheme as their own and that they will also have the strength to control a truant CHW, is far from being realistic. This, in fact, amounts to protecting the holy cow of people's "participation", irrespective of its social context.

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Notes

1. Those farmers who could sell their produce for profit or could save it for the coming year.
   (These villages were mostly so poor that indentification of such households was never a problem and every one knew which households could save or sell after consuming two meals.)
2. Judged on the basis of opinions of villagers, PHC doctors and paramedicals.
3. This stratification was used firstly, because it sufficed for the purpose of the larger study, and secondly because the information required was easily available. For a more rigorous class analysis however, land holding alone is not sufficient.

Table – 1

Categorisation using Land Holding and Employment Status in the Intensive Study Villages

Village	Category - I		Category II		Category III				Total
	0-5 acres		5-10 acres		Over 10 acres		Employed		
	No.	% of up to 5 acres	No.	%	No.	%	No.	%	
Gijri	43	48.2	10	11.2	0	-	36	40.4	89
Barbaspur	62	52.5	3	2.8	3	2.8	33	31.7	104
Maliagoda	26	29.1	39	43.8	17	19.1	7	7.8	89
Kumurdu	47	43.0	35	39.3	18	16.5	9	8.2	109
Badwahi	143	69.0	44	21.2	10	4.8	10	4.8	107
Varam Tola	21	52.5	5	12.5	3	3.3	11	27.5	40
	345	54.0	136	21.3	51	7.9	106	16.6	638

Table 2

Distribution of surveyed villages according to the percentage of 0-5 acre land owning and well-off households in the four Groups of villages.

% of 0-5 acre land owning households	Group I Villages %	Group II Villages %	Group III Villages %	Group IV Villages %	Group I & II together %
upto 50	4 (33)	4 (27)	1 (14)	0	8 (30)
51-75	6 (50)	8 (53)	4 (57)	2 (50)	14 (52)
76-90	2 (17)	3 (20)	2 (29)	2 (50)	5 (18)
% of well-off households					
0-5	9 (75)	8 (53.3)	1 (14.2)	4 (100)	
5-10	1 (8.3)	3 (20)	4 (57.1)	0	
10-15	1 (8.3)	2 (13.3)	1 (14.2)	0	
15	1(8.3)	2 (13.3)	1 (14.2)	0	

See PP. 97 to 100 for tables 3 to 8.

COMMUNITY HEALTH PROJECTS: AT THE CROSSROADS ?

sumathi nair

Any number of alternative experiments in community health have come up in the last decade. This article takes a closer look at four such projects which have today become models for others. The article is not an attempt to run down any one or other project or its founder. Rather, it raises relevant questions about the contribution of these projects to health and development, their overall perspective, and the manner in which they are organised and administered.

The early 70's was a period for a general spurt in development activities of different kinds. This was the time when some of the major community health projects were started. It is over a decade now since they have been established and their effectiveness in achieving the goals initially set up is now under review.

A careful study of these projects would reveal various conflicting aspects which deserve deeper study. All these projects have, over the years, come to revolve around the founders, while the people centred thrust they had set out to achieve has not been realised. Yet their contribution to the field of community health cannot be denied.

The focus of this article is to try and analyse what led to the present situation — the limitations inherent in such projects and the other contributory factors. I must add that this article is not an attempt to run down any one or other project or its founder. Admittedly it is far easier to be analytical in retrospect, than it must have been to have visualised the pitfalls before the event.

For the purpose of this exercise, I will take four well-known health/development projects — Gonoshasthya Kendra (GK) Bangladesh, the Jamkhed Project, Maharashtra, the Deenabandu Project, Tamil Nadu, and the Comprehensive Rural Operations Service Society (CROSS) project, Bhongir, Nalgonda District, AP. My comments are based on personal experience, literature and personal communications.

Gonoshasthya Kendra (G K): In 1971 during the Bangladesh war of liberation, a few doctors, of whom Dr. Choudhary was one, set up a hospital for the care of the wounded, which moved into a rural area after the war and started a community health project in Savar, near Dhaka. This Peoples, Health Project is now funded by foreign donors. Today they have 65 trained paramedics (mostly women), nine of whom are village based. They undertake health work, run a school, pharmaceutical factory, a women's centre and have formed agricultural cooperatives. They are today sought after by the government and international bodies. for the health training they provide. GK has "arrived" — they have further plans for expansion.

Jamkhed : The comprehensive Rural Health Project was founded by Drs. Rajnikant and Mabel Arole in 1971 in Jamkhed, Ahmednagar Dist., Maharashtra in 30 villages (covers 60 villages now). They set up a project to deliver health care in rural areas, implementing the village health worker scheme, involving community participation. They also gradually included training in agriculture, provision of safe drinking water, employment schemes, nonformal education etc. They have been receiving some support from donors abroad. The Drs. Arole were given the Magsaysay award for their work in this field.

The Deenabandu Project : Drs. Prem and Hari John started their work in Deenabandhupuram some miles from Vellore in Tamil Nadu in 1972-73. They gradually shifted their focus from "help to all" — to helping the needy. A community health programme was started and village health workers were trained. They are supported largely by the organisation called World Neighbours. Here too, the doctors realised that ill-health had to be tackled in a broad and integrated manner taking all factors leading to poverty into account. They have, for this, started several programmes — economic loans, agriculture and animal husbandry, literacy classes etc.

CROSS : Founded by M. Kurien in 1975 with the intention of "empowering the poor", they undertook the work of organising the poor to fight for their rights. Starting with less than a 100 villages with funds from donor agencies abroad, the organisation has expanded today, to reportedly, 500 villages in and around Bhongir, in Nalagonda District of Andhra Pradesh. The programmes include providing economic loans, training in agriculture and animal husbandry, health and adult literacy, to the poorer sections of the villages. Their major achievement has been the formation of sangams for men and

women, in each village, where the problems they face and the programmes offered, are discussed. CROSS is today supposedly one of the leading development groups in the country.

The founders of these projects are all doctors (except for Kurien) who had been trained within the established medical system and yet had the vision to conceive of an alternative approach to health, one for which few models were available at that time. Besides, all these groups, spoke in terms of "community participation". It was perhaps the spread of leftist ideas at that time that influenced these non-political groups with the ideals of democracy and people's rule. Kurien and Choudhary, in particular, had connections with the communist parties of their countries. One therefore assumes that their notions of people's participation was based on a relatively better understanding of the rural situation and the power structures that operated within it.

The Drs. Arole and Drs. John, on the other hand, were more influenced by the christian missionary spirit and were thus keen on doing "service to the need" (John & John, 1984). To them people's participation had a different meaning. "We started his as a total community programme for the rich and the poor alike, for we believed we had a duty to all" (John & John, 1984). Similarily Dr. Arole, talking about their selection of Jamkhed says, "At Jamkhed the leaders made arrangements to provide accomodation for the staff of approximately 20 people..... . ..... The leaders also tried to understand the basic concepts of the project". (Arole 1980). When the leaders of a village are given such importance it is not likely that there could have been much participation by all sections in the village. Drs. John admit that they gradually realised that their understanding was not right (John & John 1984).

Despite their differences in background and approach to start with, all of the project holders realised gradually that health was not a matter of merely delivering medical services, it was closely bound to the poverty of the people, their lack of food. Gradually the programmes expanded to improving agriculture and economic backwardness through the granting of loans, setting up of night schools and women's groups. They made attempts to tackle the problems which, as they saw it, lead to ill health.

With the loans provided — at GK it was 100 taka per person at first with a 4 percent interest to improve his agricultural production — some of the village folk did manage to improve their living conditions. All the villages that were adopted by CROSS in its initial years have at least one well today, for general use. Training in improved agricultural methods, on all projects have helped some of the poor to make the best use of the little they had. The non-formal educational classes, on all projects, taught some of the village people to read and know where to put their signature and so on. Basic arithmetic taught to the women at GK have helped them as they said, to run their small vegetable vending business more efficiently.

It is in two particular areas however — that of health (except at CROSS) and women's development that there has been a great advancement. This can be seen in the lives of the women, who have been involved in the project, particularly in Savar, but also in the other project areas. Many women who have only known oppression have now come to look on their lives with greater hope and confidence. The excitement this knowledge has generated was seen in the literacy classes at GK in the fact that a woman health worker found the courage to stand for panchayat elections at Jamkhed and in the militancy of the women at Bhongir (CROSS).

In the area of health all the areas mentioned have in the last decade registered a fall in the IMR, immunisation coverage of mother and child is high, the family planning acceptance rate is also far higher than the national average and the maternal mortality rate has fallen. The number of 'at risk' cases are provided with regular care and in case of emergencies immediate care is provided by the referal system, where operations too are conducted.

The improvement in the health status and the status of women in these areas, are more or less, directly as a result of the programmes undertaken. This has been achieved through consistent hard work over the years, the training provided to the paramedics is quite thorough and they are very conscious of the great responsibility placed on them. Today if there was to be a test of skills in dealing with rural health problems at the village level, between these paramedics and city trained doctors, the paramedics would come out in flying colours.

Inspite of the benefits these development programmes have conferred on the people of the area anyone with some understanding of developmental issues, who visits any of the four projects mentioned comes away with a feeling of disappointment and disquiet. Before visiting GK, it was, for me, from all I had read, a model project in community health

with the people directly involved in the programme. I looked forward with great anticipation to seeing the project, only to be disappointed from the first few hours itself. The project has a 100 acre campus with two large multiple-storied structures on it. As I entered the campus, I was made to wait at the gate before being taken to one of the senior paramedics I knew, just so that my reference could be cross checked. The women gate-keepers were in uniform and were there to see that all and sundry do not enter the place. This by itself was shocking—such a clearly hierarchical structure and such control did not, in my mind jell with a democratic set-up. The rest of my stay only led to confirm this impression.

Centralisation of Authority

Perhaps the other projects do not have such structures but certainly from all reports, these other projects too have a tacitly functioning hierarchy, which is fairly rigid with the sole decision maker/arbitrator on practically all issues, being those at the top, be it a Choudhary, Kurien, John or Arole. No doubt it is these few who have had both the vision and the longest exposure to the work undertaken and hence have a right to a certain amount of decision-making. But what of the others who also worked along with them over the years? There appears to be very little of sharing in the process of decision-making. This almost total authority that they wield was once defended by one project director who said, "After all I get the funds, so its for me to decide what I do with it". Perhaps the others would not put it quite so blatantly, but in essence this approach operates in their projects too. Another director is known to have sent in a proposal for a new scheme without consulting his senior colleagues, who came to know of it only when a member of the donor agency mentioned it a year later!

The major danger in such autocratic trends is that of the centralisation of power. Every major and often minor decision needs an okay from the people at the top. This becomes particularly difficult as the project expands and the work increases, as has happened in all four cases. Not only do the individuals at the top have to work harder — which any one familiar with these projects is witness to, many of the decisions get delayed and several are not followed up. Often field level coordinators do not feel confident enough to take on a responsibility they will later have to answer for. At times issues instead of being settled at the village/cluster level, are brought by an individual directly to the chief so as to gain support for his point of view, before presenting it to the village sangam. In CROSS, for instance, the scope for such lobbying with the boss is immense. The "games of power", that eventually set in are in contradiction to the earlier vision of "community participation".

The trend described here is perhaps due to the lack of accountability the project heads enjoy. Maybe in the earlier phases of their growth they were accountable to their funders, or there might have been the danger of their funds being stopped. But as their fame and "success" increased they have now got a 'carte blanche" on funding. Often no major uncomfortable questions are asked of the project holders nor are any but the barest stipulations made of them.

The project holder is theoretically not answerable to the people whom he has set out to serve. The people are not told very much about programme budgets, policies, apart from what is necessary for their day to day functioning. Yet the project directors, particularly in the early years of their work, have shown a sense of responsibility to the rural poor, perhaps because of their basic idealistic motivation. Nevertheless there is very little the people can do about changing policies, today. They are not taken into account.

As for the lay public, they could not care less about what goes on at these projects. The Government of India, had an uneasy relationship with such organisations earlier but now seems keen on formalising it. Toward this effort recently it was announced that henceforth all foreign funds to such projects would require central government clearance. Even if this is implemented strictly, the way this money is spent would be entirely decided by the project directors. Thus these directors have the field to themselves. A method of operation which does not have an inbuilt system of checks and balances is very likely to lead to absolute control by those in charge. This is not very healthy for those around them or for themselves.

The same authoritarianism also makes the project directors hypersensitive to criticism. They have received such accolades from the press, both national and international and are proud of their achievements, so much so, that they will put up with little criticism. A group of doctors wanting to do a critical evaluation of the Jamkhed project in 1980 were very specifically told that their report would have to be okayed by Dr. Arole before it went to the press. Such behaviour is but a symptom

of the malady but this too proves harmful to the project in the long run.

Cosmetic Changes, Not Structural : Why?

It is true that in all these projects, it is clearly recognised that the prevailing ill-health is due to the socio-economic backwarndness of the area. As a result the project directors have become concerned about the general betterment in the living conditions of the people apart from providing health care. Yet these efforts in the form of economic loans, agricultural inputs etc. described earlier are only superficial, cosmetic changes which do not bring about structural change. At the most they temporarily lull some people into believing that "something is being done". In the long run as we shall see, they do more harm than good. The dependency of the target population on the project increases. Worse still, those among the poor who do get benefits from the projects, are envied by those who do not — this is as true of every one of the four projects described as of other such projects. In fact, this sometimes leads to village feuds. While at GK I was told of a case where non-beneficiaries implicated a beneficiary in a police case. The conflicts in the fragmented, caste ridden village situation thus get further aggravated by these efforts.

Such a superficial approach to the solving of deeprooted rural problems is particularly difficult to understand from people like Choudhary or Kurien who, considering their background, ought to have a clearer perception of the interplay of socio-political forces in society. One is naturally led to speculate on what could be the influences which result in this deviation from their original goal. Four possible reasons could be :

(1) Constraints placed by donor agencies — despite their easy relationship with donor agencies today, these directors must have had certain conditions laid down for them in the early days of their effort. Perhaps it was tacitly made clear, that any attempt at fundamental change would not be supported. For example, in the earlier phase CROSS did try to organise the rural labourers. Gradually this activity stopped or was sporadic, over a small area, with the director being careful not to be present on such occasions. The donor agencies could perhaps have had a direct influence on the petering off of the radical approach.

(2) The reason for sticking to cosmetic change could also be that the radical approach is too demanding, too risky to be sustained over a long period. Most workers within such organisations join for "employment" and a "living wage" and not because of their 'commitment to a cause". They are, therefore, not too willing to risk their lives for the villagers they are supposed to represent. This is not to say that it has never happened. One paramedic at GK was, in 1976, murdered by the local people who were opposed to the change he was trying to bring about. Possibly there are other minor instances of acts of courage in other projects too, but, as the years go by, one gets to hear of few incidents of actual struggles with the local powers. As mentioned earlier the risk to one's life and sustainance of the project, is too great.

(3) Thus we come to the next factor in this tie-up— that of the groups gradually taking care not to antagonise the forces in power. There even appears to be an understanding among the local power groups the police and these organisations that each will leave other alone. The status-quo remains and basic change fails to occur. There is the example of a coordinator at CROSS who, with the blessings of the director, employs unpaid bonded labour on his farmlands, while he gets a salary from the organisation, for the "upliftment of the poor".

(4) These experiences have not in any way led to any deeper analysis of the problems which these projects both face and create. Or if such an analysis has been made none of the projects have acted upon it. Just as the different departments within the government have come to function independently of each other, inspite of knowing the need for inter-departmental coordination, so too on these projects the directors have had to narrow down their efforts to chiefly providing health care and superficial changes or things would become too difficult for them. All efforts at radically changing the health situation, has to remain at the verbal level. One would find that since it is so, once these directors withdraw from the area, the health situation in 5-10 years time would most probably revert to what it used to be before the doctors took over.

Models Which Are Not Replicable

The next major issue, is that of the replicability of these projects. It is not possible to replicate any of them unless one is an Arole, John or Choudhary. Sheila Zurbrigg points out that the success of the Jamkhed project led the Government to implement the Community Health Worker (CHW) scheme at the Primary Health Centre level in 1978 (Zurbrigg, 1983). And this was, as is

established today, a failure — for one thing the "essential ingredient of the 'model' project — a relationship between village level health worker and his/her community based on trust, committment and accountability to the poor village families" — was missing. This led her to ask, 'If the essential relationship of a CHW approach is therefore doomed when placed within the caste-class structure of society, what possibility is there for effective broad replication of the locally successful 'model' project?" (Zurbrigg, 1983). Similarly the present medical education does not generate, in doctors, any sense of commitment to the poor or their health problems. The medical system too, on the whole does not cater to the needs of the rural areas, much less the rural poor. Thus any question of the replicability of such projects is moot.

Related to this is the growing dependence of the people in a project area. When a project like any of these gets established its continued effectiveness over a period of time becomes heavily dependent on the presence of the individuals who started them. None of the projects functions in a manner which will enable it to carry on as before if the 'leader' were not there. The people in the project areas become dependent on them and their sustainance depends on the project. Even the health workers are rarely allowed to work independently (though some senior paramedics do so, to a certain extent, at Savar). As Prem and Hari John admit, "Of course, two independent control mechanisms do exist in the programme, more to see the effectiveness of the VHW than to "supervise" " (Zurbrigg, 1983). This inability to give up control becomes a decisive factor in determining the eventual nature of the project. This is the tragedy, that inspite of setting out to establish a people's project, even after a decade of work, the people cannot, or are not seen as being capable of running their own project.

Together with this is the notion of self-sufficiency. There has been a time in all the projects where there was some talk of making the project self-sufficient. Initially, at CROSS the idea was that the economic loans given to the poor would be returned in full and with this pool of money thus generated, fresh loans, without outside help, could be made. This could be done in several areas and gradually the economic loans programme could become self-sufficient. But this idea was not seen through and gradually the talk of self-sufficiency died down. With so much foreign funds available so easily where was the need to learn to be independent?

Here it must be said that perhaps a health project is difficult to sustain without funds — as some others have learned to their cost. But it is not impossible (Werner, 1978). Even assuming that a certain minimum of funding is necessary, surely some attempt to generate it locally could be made? It is interesting to note that this notion of self-sufficiency does bother Drs. Prem and Hari John. They however manage to side-step it, though not very convincingly, by saying "We had this problem until we realised that "Self-sufficiency" referred to the project, while what we were aiming to build at the community level was "self reliance". We were working towards building community capability in health care and hence self-reliance" (John-John). How can a people dependent on a project that is not self-sufficient, be taught to be self-reliant?

Another trend manifest in these circles today is the development of jargon and "management" techniques. Thus CROSS has a management consultant on call to tell them about "systems analysis" and "strategy planning" and so on, to help alleiviate rural poverty — the old methods having failed perhaps the new will succeed. Terms like 'intersectoral integration", "integrated community" approach and so on are bandied about. They do this more, it would seem, to please the elite they interact with and the donor agencies, than to help solve any rural problem, for it is hard to believe that these founders still do not acknowledge that the essential question is one of sharing of power and its fruits by all.

What now ?

These projects have come a long way in the last 10 years — there were several points along the way where things could have changed for the better. But this was not to be. Now after having a positive impact on the health status of the people, their continued presence in the area is only likely to create fresh problems, as we have seen. It is time now that they either decided to gradually withdraw or radically change their strategy. The passing years have proved that these miniscule efforts do not really make any impact on the total health situation. They would be far more effective today if they undertake organising work among the rural poor and see that they demand that the existing government health facilities be made available to them.

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Work and Health : An Alternative Perspective

Bharat Patankar and Jogen Sengupta

The "work and health" question (SHR 1:3) is a historically specific one. Its meaning has changed with changes in the social structure. There are societies which do not face this problem at all. All these aspects of the problem have to be considered in formulating strategy and action in today's context.

There were societies which did not face the question of "work and health". These were societies which "work" is not defined in state, class, patriarchal, race or caste terms. Their vestiges exsit today. Not only that but in them "work" is not regarded as "struggle" with nature or an attempt to master nature. When male and female human beings think of themselves as part of nature and live and act accordingly, they cannnot separate "work" from play or pleasure. Appropriating from nature external to them does not become a thing separate from lively and creative intercourse with it. So the risks, hazards and dangers could not be considered as "work and health" issues, but as part of the total life of human beings along with nature.

Work and life got decisively separated from and turned against each other only after patriarchal, statist and class domination emerged. Casteist and later racist domination became part of these. It is only from this point that human existence and the enrichment of it becomes seen as a struggle with external nature, an attempt to achieve mastery over nature. It is only in such societies that the problems of health becomes seen as one of "work and health".

In these societies the life of the majority is decided not by themselves but by the state, males, dominating classes, castes and races. Once "work" got separated from other life it became the first health problem, giving rise to unhappiness and a sense of subjugation. This alienation was the first and greatest problem of "work and health", causing basic ill-health whether work contains other risks, hazards and dangers or not. People working under such conditions could not feel that part, the work part, of their lives as their own. Or they internalised this ill-health and became dehumanised apart from the attempts of struggle they gave against these conditions. This major aspect of ill-health because of work will remain in our lives until the end of various hierarchical subjugations and alienations from remaining nature, no matter what changes take place in the technology. The nature of this ill-health has taken various forms depending on changes in the social structures.

Technoloy is not separable from the process of subjugation of the people who work with it. It is not free from the type of relations of humans with nature. Its structure internalises these relations. The particular kind of technology we are experiencing today which is destroying the ecological balance and creating disastrous health problems for people working with it shows these internalised social relations. The fight against ill-health and the hazards of "modern technology" cannot simply mean dislodging the ruling class which controls it but a fight against all the practices and social relations which structure it.

Patriarchy and the sexual division of labour create distinct health problems for women and children. This happens not only in the fields and factories but also in home work (which is not considered work at all in the male chauvinist culture). This problem of work is related not only to surplus value creation and technology but also to specifically sexual and patriarchal relations. Without a study of this aspect of "work and health" one cannot deal with the ill-health of a majority of the population.

Casteist social division and division of labour have been creating problems of health related to work for more than thousands of years in India. Apart from class divisions, these forced the majority (in some cases a minority) of the people to do work which obviously creates health hazards and traumas of all kinds. Today, even wrapped in capitalist relations of production on a wide scale, casteism and racism are creating specific problems related to work.

Class and state domination is both a part of this picture and a major factor in themselves creating ill health related to work. While it is true that these dominations are very much concerned about extracting surplus or surplus value, it is not the sole concern they have. Whether capitalists or the state will spend resources for reducing health problems at work also depends on their concern to maintain their continuing existence as dominating sections. At certain conjunctures they might even bear losses

or invest in "non-profit-creating" measures to maintain health in the long term interest of appropriating surplus or surplus value. Such actions might be deceptive for anyone who sees the picture only as one of "continuous greediness to increase surplus value no matter what happens with the workers' health."

Today the new movements of ecology, health and safety groups in the unions, workers' control and grass-roots democracy, various kinds of peoples' science movements, women's health groups and so on are bringing forward studies and practice helpful to this question. Many left groups are becoming conscious of this aspect and trying to act accordingly. These are important advances and close coordination of all the movements, unions, organ - sations of the rural poor community organisations, cultural organisations will deepen and extend this movement. It will be a movement that may start with efforts to reduce ill health in fields, factories and homes, but it has to fight to abolish class, state, caste, and patriarchal domination along with abolishing the technological monstrosities specific to these dominations. This only can establish harmony with nature and abolish "work" itself, the first and basic cause of ill health.

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Need for Population Control Cannot Be Ignored

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The editorial perspective (SHR, 1:4) by Manisha Gupte does an excellent job of summarising the marxist critique of Malthusian view on the 'problem of population'. However, the perspective gives rather an incomplete picture of the situation. It is true that the ideology of population control, as preached and practised in the poorer countries of the world, is primarily used to divert attention from the real issues and factors behind poverty and other related aspects of life for a vast majority of people.

The perspective fails to adequately emphasise the well established fact that in the experiences of today's developed market economies, the changes in the family size and population structure since Industrial Revolution followed a rise in living standards of population. It was also significantly affected by a host of legal and institutional measures adopted by the goverment of the day as the needs and priorities of the ruling classes changed. This, of course, only enforces the view that population control is a consequence of the development process and cannot be a substitute for necessary strutural changes in a system where a tiny minority is the prime beneficiary of the process of development.

Another important aspect that should have been reflected in the perspective is related to the changes in the pattern of population growth in the centrally planned economies of Eastern Eurpe, USSR and China in the last few decades. One does not have to agree with the details of alternative systems there to recognise the effectiveness of medical system in these countries and its impact on their population growth.

The idelogical misuse of the family planning and population control by the ruling classes in various countries of the world should not detract anyone from the possible disturbing effects of continuing high rates of population increase in large parts of the world. Again, one does not have to be a neoMalthusian to say that, unlike the historic experiences of the developed market econmies which could afford the 'natural' adjustments in their population growth and structure spread over a long period, the world as a global entity has to take cognizance of the natural resources and their potential growth as well as limits to growth as the global population continues to increase. Family planning and population control must constitue an explicit objective of any meaningful strategy of development. Population control cannot be a substitute for development; development without measures to check population growth is not likely to be very meaningful either.

I am quite surprised to see the benefits of birth control and contraceptives only briefly discussed under the sub-title of 'the feminist perspective', as if there were no socialist perspective of birth control! I am sure the author views the feminist perspective as integral to the socialist perspective, but she fails to clarify that benefits of birth-control and contraceptives have much wider implications for the society as a whole and must be recognised as such, apart from their effect on sexual mores of the society.

Women, for obviovs reasons, are the direct (actual and potential) beneficiaries of the various methods of birth-control. They also are, as a result more prone to various, at times dubious, experiments in the field. But, quite surprisingly, again, the author has not even mentioned the the politics of number in relation to birth-control for men.

Another issue that deserves mention : I am greatly disappointed that a magazine like SHR does not have any leading feature on the health issues and the peoples' right to know potential and actual hazards to their health, associated with industries in which they either work or which are in the vicinity of their homes, except for a note-like article by Anurag Mehra. I am sure that despite your prior commitments, Bhopal tragedy deserves more importance than has been hitherto accorded. I hope your next issue on 'Health and Imperialism' will more than compensate for this omission and will also focus on the implications of this tragedy for the peoples' right to health and safety in addition to its other aspects rooted in the political economy of industrialisation in the poor countries of the world. And finally, hearty congratulations for timely production of SHR.

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Criticism of Tubectomies Unscientific

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A frontal attack by Sucha Singh Gill in his *Politics of Birth Control Programme in India* (SHR I : 4) though not comprehensive enough, was very much needed. But he goes too far at the end of his article, and makes some very sweeping statements which can not stand a little deeper probing. The way he attacks and rejects tubectomies as a method of sterilisation is unscientific. It is superficial to criticise tubectomies by just saying that after tubectomies "back-ache, pelvic pain and other problems make the women chronically ill. In a survey conducted in Punjab, more than 80 percent of women complained of one or more problems after operation." There is a lot of literature on complications, complaints after tubectomies and it is widely known that many women wrongly attribute many of their health-problems, particularly back-ache to tubectomies. A survey merely reporting what women felt after tubectomies is too insufficient a basis for a sweeping criticism of tubectomies. A correct argument would be to point out that though incidence of complications due to tubectomies is not high in absolute terms, tubectomies should not be pushed when far more simpler and safer method of sterilisation is available for the male. Since the government and the medical system does not want to attack the patriarchy in the society, (they themselves help perpetuate it) it is pushing tubectomies, when in reality it should be used only in exceptional circumstances.

Gill's reasoning that birth control programme is "a serious attempt by the rulers to reduce the number of their enemies in order to reduce the risk to their oppressive regime" is quite off the mark. Increase in the number of pauperised population does not increase the chances of social revolution or even a revolt. It is the contradiction between developed capacities, aspirations of the people (as a result of capitalist development) on the one hand and their actual suppression (especially in periods of crisis) due to capitalist social relations that create possibilities of revolution.

Gill does not take into account the role of patriarchy in deciding the size of the family. The necessity of having male children; non-cooperation of husbands in family planning (both consequences of patriarchy) contribute to a larger size of the family even when women do not want more children. (In India every year, about half a million women undergo medical termination of pregnancy and about four to six million undergo abortion through unsafe methods which kill thousands of women every year. This shows that they many times do not want pregnancy.) It is true that unlike in middle and upper class families children in toiling classes do contribute to family's income. But they probably consume more than what they produce since upto the age of atleast three years they consume on an average, about a quarter (in terms of calories) of what adults consume without being able to contribute in production. Slightly older children look after younger children and spare adults for outside work. But the point is—was there a necessity of having this younger child in the first place?

High infant mortality and lack of old age security are the real justification of having a somewhat larger family The rest is due to patriarchy and ignorance about family planning. Let us not gloss over this and indirectly justify any unnecessary burden on women due to patriarchy, ignorance...

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REVOLUTIONARY IN FORM, REACTIONARY IN CONTENT
A Critique of Ivan Illich

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Ivan Illich's contribution to the analysis of health care and the Illichian school of thought which it has generated have contributed enormously to the strengthening of the basic tenets of bourgeois individualism. The school's very political basis together with its regressive solution to the problem make it reactionary in content. It serves the purposes of monopoly capital by promoting a victim-blaming ideology, an anti-technological mode of medicine in commodity form and advocating a tightening of the medicare belt. The article presents a marxist critique of the basic theoretical and political postulates of Illich. It is largely based on two articles, (Vicente Navarro's "The Industrialisation of Fetishism" in 'Medicine Under Capitalism' (Prodist) New York, 1976, and Howard S. Berliner's 'Emerging Ideologies in Medicine in 'The Review of Radical Political Economics' (9:1, 1977)).

In the last decade a number of books have appeared attacking clinical medicine in fundamental ways. Of these Ivan Illich's *Medical Nemesis* (Pantheon 1976) has received wide critical coverage in the popular as well as the academic media. Although Illich offers a highly informative and important critique of scientific medicine, in the final analysis he tries to suggest a reform of medicine along bourgeois ideological lines. This leads him to conclude that health is a function of our individual consumption pattern, that less medical care is better, so that working class would be better-off (healthier) in the long run by tightening their medical care belts.

The net impact of Illich is to serve the purposes of monopoly capital by : (1) Diverting attention from the economic sources of disease and collectively based response and advocating a victim-blaming ideology; (2) Undermining the petit bourgeois mode of medical care delivery leading to life style politics; and (3) Legitimising a cut-back of all forms of medical care services.

The Roots of the Crisis

There is no doubt that modern medicine is passing through a period of deep crisis in the developed countries outside the socialist block. The crisis of modern medicine reflects and is a part of the crisis of modern capitalism. Briefly, the cause of the crisis lies in the falling rate of profit due primarily to increasing variable capital costs (mainly wages and fringe benefits) not matched by increased productivity. Resumed accumulation requires the destruction of unproductive capitals and the diversion of variable capital (including social wages) towards new, relatively productive constant capital. Lowering variable capital costs involves both the diversion of labour and money away from the reproductive sector (health, education, labour, welfare) and the reorganisation of the reproductive sectors to place them more firmly in the control of capital. The health system has thus come under the scrutiny of capital to reduce those costs and help expediate the recovery process. An ideology which promotes anti technological (hence cheap) modes of medicine in commodity form is advantageous to capitalist's efforts to lower the costs of labour.

During periods of economic expansion and explicit class struggle, capital has been forced to provide greater medical care and preventive services for workers (raising its variable capital costs). As accumulation slackens the need to reduce those costs of reproducing labour heightens. As the costs of capital rise through expanding medical technology and through inflationary medical care reimbursement systems, without concomitant gains in terms of productivity, capital seeks to lower the level of health care provided. This struggle takes an added significance in a period of severe economic crisis.

Victim Blaming Ideology

As capitalism progresses and leaves increasingly dire health hazards in its wake, the technologically-oriented system of medicine tends to mask the origin of that morbidity by treating illness as an individual disorder through the use and purchase of commodities. Increases in disease morbidity and mortality and the increasing recognition that they are directly attributed to the capitalist mode of production cause concerns for capital on two distinct levels. It brings the legitimacy of capital into question at the point of production

as workers become more concerned about the effects of the production process on health, and it greatly increases the costs of providing medical care as workers spend more time off the job going through elaborate radiological, chemical and surgical therapies. The economic crisis exacerbates this struggle and thus capital tries to shift the responsibility for disease back to the worker—in this case through the promotion of victim-blaming ideology—and of individual solution for the worker defusing the class aspect of the morbidity.

Victim-blaming is not a new ideological response by capital. It has been used in education, welfare and even in health before. What is especially significant about this new wave is that, there is a chance that victim-blaming strategies may become the basis for public policy. In the west the popular media have been devoting a growing amount of space to life style changes and their positive contributions towards health. It is clear that this victim blaming epidemiology is getting wide circulation and acceptance.

Ideology of Industrialism

Illich is an articulate theoretician of the most prevalent and influential ideology used to explain our societies; i. e. the ideology of industrialism. The primary characteristic of that ideology is that the production requirements of the technological process and *Pari Passu* (at the same rate) of industrial organisations are the most important determinants of the nature and form of our western developed industrialised societies. In a fatalistic and almost deterministic way the former, the technological process, leads inevitably to the latter, the industrialisation of society. Moreover, according to the theorists of industrialism industrialisation has transcended and made irrelavant and *passe* the categories of property, ownership and social class. Indeed ownership loses its meaning as legitimisation of power. And control, now assumed to be divorced from ownership has passed from the owners of capital - capitalists - to the managers of that capital, and from there to the technocrats.

A final characteristic of industrialism is that it claims to be a universal process. In other words all societies regardless of their political structure, will evolve, according to the dictates of industrialisation. Indeed, according to a key component of that ideology, the theory of convergence, all societies will progress towards the urban industrial model of the future. Thus, socialism and capitalism are usually seen as two convergent roads to the same destination - the industrial model. Viewed in this way, the social problems of capitalist societies become not the problems of capitalism (an altogether *passe* category) but the problems of industrialisation.

Illich believes that industrialism is the main force shaping our societies and that unavoidable and irreparable damage accompanies industrial expansion in all sections, including medicine, education and so on. The industrialisation of medicine leads to the creation of a corpse of engineers — the medical profession — comparable to the technocrats of the main social formation of industrialised societies, the bureaucracy. Thus, the industrialisation of medicine means its professionalisation and bureaucratisation. And Illich believes that capitalism and socialism are indeed outmoded concepts since they are basically converging towards the same path of industrialisation that overwhelms and directs their social formations. In this interpretation, then, the class conflict has been replaced by the conflict between those at the top, the managers of the bureaucracies indispensable to the running of an industrialised society and those at the bottom, the consumers of the products — goods and services administered by those bureaucracies. As applied specifically to medicine, that conflict is the one between the medical bureaucracy, primarily the medical profession and medical care system; and the consumers, the patients. This antagonistic conflict appears as iatrogenesis (damage done by the provider) it is clinical when pain, sickness and death result from the provision of medical care; it is social when health policies reinforce an industrial organisation which generates dependency and ill-health, and it is structural, when medically - sponsored behaviour and delusion restrict the vital autonomy of people by undermining their competence in growing-up, caring for each other and aging.

How can we avoid and correct this iatrogenesis, the extensive damage done by the industrialisation of medicine? Before stating his own solution Illich briefly considers several other alternatives presently debated in political circles. In discussing solutions for clinical and social iatrogenesis, he especially rejects the socialisation alternative that he attributes to the equalising rhetoric of what are misleadingly termed the progressive forces among which he includes liberals and marxists. According to his normative conclusion, the redistribution of medical care implied in the socialisation alternative would make matters even worse since it would tend to further medicalise our population and create further dependencies on medical care. According to

Illich "less access to the present health system would, contrary to political rhetoric, benefit the poor". *In that respect Illich finds the creation of the National Health Services in Britain as a regressive not a progressive step.*

Instead of socialisation and its implied redistribution Illich recommends the following solutions for clinical and social iatrogenesis. The mode of production in medicine should be changed via its deprofessionalisation and debureaucratisation. He suggests that licensing and regulation of healers should disappear and concerns of where, when, how and from whom to receive care should be left to the choice of the individual. Collective responsibility for the health care should be reduced and individual responsibility should be maximised. Self-discipline, self interest, and self care should be the guiding principles for the individual in maintaining his health. In summary, each one should be made responsible for his own health.

As for the structural iatrogenesis, he again dismisses the alternative of socialisation and public control of the process of industrialisation, recommending instead the reversal of that process ie. breaking down the centralisation of industry and returning to the market mode. The essence of his strategy for correcting structural iatrogenesis, then is an anti-trust approach with strong doses not of Marx or even Keynes but of Friedman.

A major weakness of his evaluation is that he takes as an indicator of the effectiveness of medical care, indicators of cure. Indeed, he seems to confuse care, with cure. And in evaluating the effectiveness of medical care he does what most clinicians do; he analyses the degree to which medical intervention has reduced mortality and morbidity. In other words the effectiveness of health care intervention is analysed in terms of curing disease and avoiding mortality. But the limited evidence available indicates that medical care may reduce disability and discomfort in peoples' lives. For that taking care to occur, our medical care system would have to change very profoundly to better enable the system to provide that care. Still Illich does not seem to accept the possibility of creating another system in which the priorities would be opposite to those of the present ones, with emphasis given to care as opposed to cure service. Actually, Illich would not even welcome such a care-oriented system since it would increase the dependency of the individual on the physician and on the system of medical care, preventing the much needed self-reliance and autonomy.

Illich considers social iatrogenesis, the addictive behaviour of the population to medical care, to be the result of manipulation by the medical bureaucracy. He postulates that the consumer behaviour of our citizenry is primarily determined by its manipulation by the bureaucracies created as a result of industrialisation. The manipulation of addiction consumption and by bureaucracies (including medical care bureaucracy) is not the cause, as he postulates, but the symptom of the basic needs of the economic and social institutions of what he calls industrialised societies, the industrialised capitalist societies. Those bureaucracies, are the mere socialisation instruments of those needs ie. they reinforce and capitalise on what is already there — the need for consumption, consumption that reflects a dependency of individual on something that can be bought, either a pill, drug, a prescription or a car.

Actually those dependencies are mere symptoms of a more profound dependency that has been created in our citizenry not by industrialisation but by the capitalist mode of production and consumption - a mode of production that results in the majority of men and women in our societies having no control over the product of their work, and a mode of consumption in which the citizenry is directed and manipulated in their consumption of the products of their work. This dependency on consumption—this commodity fetishism—is intrinsically necesssary for the survival of a system that is based on commodity production. In the medical care system in capitalist system we find that (a) the alienation of the individual in his world of production leads him to the sphere of consumption of health services and that (b) the medical care bureaucracy is just administering those disturbances created by the nature of work and the alienating nature of the capitalist mode of production.

Illich finds structural iatrogenesis to be due to the culture of industrialisation. His solution for that iatrogenesis includes breaking down the industrial bureaucracies, and returning to self-reliance and enlightened self-interest. But by focussing on the medical bureaucracy as the 'enemy', Illich misses the point because those bureaucracies are the servant of a higher category of power - the dominant class. In the health sector power is primarily one of class, not of professional control. Indeed, the medical bureaucracy administers but does not control the health sector. We find then that the main conflict in the health sector replicates the conflict in the overall social system. And that conflict is primarily not between the providers and consumer, but between those that have a dominant influence in the health system (the corporate class and the upper middle class) who represent less than 20 percent of

(Contd. on page 100)

DUST HAZARDS IN COAL MINES
A Brief Overview

amalendu das

The global energy crisis of the last decade has provided an impetus to the development of coal resources which has, in turn, meant large scale indiscriminate mechanisation programmes. These have had disastrous consequences for the health of miners. The article highlights some of these health hazards which are being largely ignored by both the mining industry and the trade unions.

Of late the management of our nationalised coal industry has laid considerable stress on promoting the production of coal. And to achieve this end large scale mechanisation with borrowed foreign technology has been adopted. Critics from the Trade Union front have correctly identified the drawbacks of such a plan of reckless mechanisation. Lack of employment generation, high overhead cost that erodes the benefit of the economy of scale, dependence on foreign countries for spare parts of the machines are the important aspects of their criticism. But one important consequence (perhaps the most vital one) of reckless mechanisation seems to have escaped the attention of all concerned. This is the problem of health hazard which is increasing at an alarming rate.

It is unpalatably true that hazard has been synonymous with the term coal mining in India. The risk of fatal disasters to which the coal miners are exposed to is as great today as it has been during the days when coal mines were owned privately — Chasnala (1975), Jitpur (1978), Hariladih (1983) disaster. The introduction of sophisticated machines has in no way reduced the chances of such accidents. But that is a different story altogether. Here the attention is intended to be drawn towards that kind of hazards which silently, slowly and steadily shorten the life span of the miners, or make them physically disabled even when there is no massive disaster in the mines.

Coal mines are inherently unhealthy places to work. Not only in underground mines, but also in open cast quarries where giant earth movers are used, the workers inhale large amounts of dust, fumes and gases which cause many killer diseases - mainly respiratory in nature. They include influenza, asthma, emphysema, stomach and lung cancer, hypertension, Pneumoconiosis and bronchitis. The most fatal of all respiratory diseases is Pneumoconiosis commonly known as black lung disease which is incurable. (See SHR : I : 3, December 1984).

It is caused by the inhalation and retention of respirable coal mine dust in the lower lungs. A noticeable dose-response relationship usually appears when exposure continues for a decade or so. Coal worker's pneumoconiosis is classified into levels of ascending severity from simple to complicated by X-ray diagnosis. Continuous dust exposure can accelerate a case of simple pneumoconiosis to more advanced stages. Miners with progressive massive fibrosis are usually totally disabled. If the dust concentration is still higher, emergence of pneumoconiosis is earlier. Some miners seem to be more vulnerable than others and this vulnerability is yet to be explained. Habit of smoking appears to have no significant role in causing pneumoconiosis among the miners. It certainly contributes to lung impairment to a miner as it does to any non-miner. It has been established with a fair amount of certainty that it is dust, be it coal or otherwise, which can cause pneumoconiosis among the miners. So dust is identified as the greatest hazard.

Dust may be looked upon as suspended solid contaminent in a state of minute subdivison present in the air. It is produced during various industrial activities like blasting, grinding, drilling and crushing or whenever any material used in industry undergoes disintegration. Such operations enhancing the occurance of dust are too common in coal mining industry. As the material undergoes progressive disintegration it acquires certain properties which has killer significance with regard to health of those exposed to its action. The very minute size (0.2-10.2 microns) itself confers it high reactivity both chemically and biologically and it becomes more toxic than its parent lump from which it has been disintegrated. These tiny particles once air borne can neither be swept off nor trapped by existing technical means. It is estimated that one cubic meter of a coal lump, after progressive disintegration may form 10^{12} particles and eventually spreads through 283 million cubic centimeter of the working environment.

Because of its small size these dust particles do not settle down and remain suspended in the air for quite long time.

It is quite natural, therefore that the various operations at the mechanised coal mines not only generate more dust but they reduce the size of the dust particles to a minimum. And these tiniest particles are more dangerous. Scientists have estimated that particles which are retained in the alveoli, the gas exchanging sacs of the lung – weigh 5 micrograms or below. These particle are termed as respirable dusts.

Generally the larger particles (nonrespirable dust) do not penetrate the alveoli and are not thought to cause pneumoconiosis. While the distinction between respirable and nonrespirable dust is scientifically valid, it is clear that both sizes can impair lung functions when inhaled in quantity over time. The larger particles are probably linked to bronchitis among the miners. Although these particles are generally not retained in the lung, continuous exposure to them during normal work year produce more or less constant irritation of the upper respiratory tract. Breathlessness has also been found to be significant among miners who do not show X-ray evidence of pneumoconiosis. Researchers believe the breathlessness is related to chronic non specific obstructive pulmonary disease. Some investigators have found, in addition to pneumoconiosis and broncho-pulmonary disease, a third as yet unidentified disease process that reduces the ability of the lungs to exchange gases.

Black lung disease has come to represent a broad definition of occupational respiratory disabilities in miners of which coal miners' pneumoconiosis (henceforth referred as CWP) is one major component. Respirable dust which is invisible to the unaided eye accounts for less than one percent of the dust in a mine. It is not clear how much nonrespirable dust is retained in the lungs when the standards for respirable dust (if they exist at all) are being met.

Along with CWP, coal miners will continue to experience other lung diseases — bronchitis, severe dyspnoea (shortnesses of breath) and airways obstruction. Many of these illness are work-related. Coal mine dusts contain a wide range of non-coal constituents including silica and naphtalenes. Researchers have found as many as 13 Polynuclear Aromatic Hydrocarbons (PAH) in the respirable mine dusts they had studied. (Shultz, Fridel and Sharkey, 1972). PAHs are tested carcinogens. Besides trace elements that are mentioned above there are a host of other elements listed as 'hazardous elements which are liberated as dust or gas in the place where coal is cut from the working face. These hazardous elements are identified as Arsenic, Beryllium, Cadmium, Fluronine, Lead and Mercury. It is worthwhile to mention here that a mine producing one million tons of coal generates one ton of each element annually. These elements may have a role in producing black lung disability either alone or synergestically. They may also play a role in the excess lung and stomach cancer found among the coal miners.

Diesel powered equipments are commonly found in all the mechanised coal mines throughout this country. Diesel engines produce emissions that are known to be hazardous, unburnt hydrocarbons, oxides of nitrogen, particulates, PAH, phenols, aldehydes, oxides of sulpher, trace metals, Nitrogen compounds, smoke and light hydrocarbons many of which cause adverse respiratory effects.

Noise is a proven hazard to the miners working in a mechanised mine. Noise may cause temporary or permanent loss of hearing sensibility, physical and psychological disorder, interference with speech communication or the reception of other wanted sounds and disruption of job performance. Excessive noise may also cause changes in cardiovascular, endocrine, neurolgic and other psychological functions. Studies on the subject indicate that coal miners have miserably worse hearing than the average.

CWP and other work related disease in coal mines have been recognised as the subjects of large-scale investigations in countries like USA and UK and this recognition came through relentless struggle of the workers themselves. A physician Dr. Lorin Kerr who is also the representative of the coal miners of America voiced his alarm against CWP "At work, you (coal miners) are covered with dust. It is in your hair, your clothes and your skin. The rims of your eyes are coated with it. It gets between your teeth and you swallow it. You suck so much of it in your lungs that until you die you never stop spitting up coal dust. Some of you cough so hard that you wonder if you have a lung left. Slowly you notice you are getting short of breath, when you walk up a hill. On the job you stop more often to catch your breath. Finally just walking across the room at home is an affort because it makes you so short of breath. (Kess, 1968.)

We do not have any Dr Kerr to lament for our miners. Our miners are not even aware of such a fatal disease. As the detection of CWP is difficult in the initial stage without powerful X-ray examination (the facilities for which is non-existent in our colliery hospitals) the miners who suffer from shortness of breath or exhaustion are often wrongly treated.

The author has encountered several such cases in the Jharia coalfield. Kripal Chamar of Damoda Colliery has been treated as a TB patient because he has been suffering from shortness of breath. Kripal was told that TB is a curable disease but he wonders why in his case the medicine does not work. Another miner Chanari Beldar of Kenduadih Colliery died of TB(?) two years ago. When this trouble of breathlessness began Chanari used to abstain from his work once or twice a week. He received charge sheets and warning letters for negligence of duty. No one bothered to enquire about the real causes of his illness and consequent abstenteeism. We do not know the exact number of miners who suffer from breathlessness or other similar symptoms of CWP among Indian coalminers. But certainly the number is not small. Even in technologically advanced countries where more effective dust control methods are used and where people are more aware of such diseases, the number of miners affected by CWP is quite large. It was estimated that in USA between January 1970 and December 1977, 4,20,000 coal workers were awarded Federal Black Lung compensation because of total disablement due to CWP. In UK, National Coal Board had conducted a survey during 1974-77 and found that seven percent of the British coal miners were suffering from CWP. In India a small scale study conducted in 1960-66 by the Chief Advisor of factories revealed that 178 (18 percent) of 2754 coal miners who were radiologically examined were suffering from CWP. Another random representative survey done by Dr Viswanathan in 1964 showed the incidence of CWP varied between 6.0 to 16.8 percent. The situation here in India is certainly alarming.

Last decade witnessed a global energy crisis caused by price-hike of petroleum resources coupled with impending depletion of the same and this resulted in reemergence of coal as vital alternative. Eventually its scale of production was raised, mines were mechanised with borrowed technology associated with heavy over-head cost in terms of foreign exchange but a thing which was conveniently forgotten is the probable environmental impact.

Legislations, covering mines safety fail to address the problem related to miners' health and welfare. It appears that miners' health and welfare as an entity distinct from mines safety is yet to be recognised. It is equally distressing to note that established trade unions with commendable fighting spirit while realising economic demand are yet to recognise this invisible monster—the fugitive dust which slowly but steadily, surreptiously advances forward to collect its toll among the miners. Now the question is who will cry a halt?

Amalendu Das, Central Fuel Research Institute, DHANBAD

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From Pg. 83

Table - 3 : People's knowledge of agencies for CHW selection and supervision

	Category I			Category II			Category III		
	1	2	3	1	2	3	1	2	3
				* SELECTION					
No. of house-holds	5	90	7	13	23	6	13	26	12
%	4.9	88.2	6.8	30.9	54.7	14.2	25.4	50.9	23.5
				** SUPERVISION					
No. of house-holds	18	84		9	33		25	26	
%	17.6	82.3		21.4	78.5		49.0	50.0	

*Code for Selection
1. By Sarpanch with or without other members.
2. Don't know
3. By hospital with or without Sarpanches.

**Code for Supervision
1. Supervised by Hosp/PHC
2. Don't know

Table - 4 : Social Background of CHWs

Tribe caste	No of HWCs	%of Total CHWs
Gonds	15	40.0
Baiga	4	10.8
Kol	1	2.7
Panika/Kangikar	2	5.4
Brahmin/Thakur	11	29.7
Gupta/Srivastav	2	5.4
Muslim	2	5.4

Table - 5

Relationship of CHWs with Sarpanch and other Elite in Pali Villages

(a) Relations with present Panchayat :

Himself a Sarpanch or Upsarpanch	Sarpanch or Upsarpanch a cousin/uncle/inlaw/ father	Panchayat members/ Mukhias as uncle/aunt/ cousin	Not related to Panchayat Members
1. Kannavahra 2. Paharia 3. Dhawrai (J) 4. Medhi 5. Kathai 6. Varmathola	1. Jamrhi 2. Bhautra 3. Vardhar 4. Makra 5. Khichkiri 6. Sarwahi 7 Bannoda 8. Karkati 9. Audhera 10. Malchua 11. Chaka 12. Gijri 13. Shahpur	1. Badwahi 2. Odri 3. Sans 4. Maliagoda 5. Barhal	1. Kanchodar 2. Jamuhai 3. Amiliha 4. Khalaund 5. Dhawrai (P) 6. Malaudu 7. Madaria 8. Manthar 9. Sunder Dadar 10. Sundri 11. Ghunghuti 12. Vadhvachhot

(b) Relations of above with previous Panchayat :

None	4. Uncle was Sarpanch 5. Father was Sarpanch 8. Uncle was Mukhia 9. Aunt was member of Pali Zila Parishad 12. Uncle was Sarpanch 13. Father was Sarpanch	4. Father was panchayat member	2. Brother was Sarpanch 3. Uncle was Sarpanch 7. Father was Sarpanch 9. Father was Sarpanch 12. Father was Sarpanch

(c) CHWs who had relatives in other influential positions:

1. Father was a well-off Thekedar of the area, Brothers Revenue Inspector and Gram Sahayak 6. Father Patwari	6. Brother school teacher 13. Father Thekedar	4. Brothers as school teachers, railway clerks, railway khalasi father-railway gangman 5. Brothers Patwari and rationshop owner Father Ranger; brothers in army.

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Table - 6 : Land Holdings of the CHW's family and occupation of male members (fathers & brothers)

Relatives Occupation	2—5 acres		5—15 acres		over 15 acres	
	(1)	(2)	(1)	(2)	(1)	(2)
Farming	2	0	7	4	5	3
Farming with employment	0	0	0	3	3	6
Wage labour	1	0	2	0	0	0
Total households	3	0	9	7	8	9
%	15.0	—	45	43.7	40	56
No. of CHWs	3 (8.3)		16 (44.4)		17*(47.1)	

(1) Adivasi
(2) Non-Adivasi

*Out of 17 CHWs, 11 (30.5)% owned more than 20 acres of land

Table - 7 : Preferred action in Minor Illnesses in the intensive study villages

Category	CHW alone	CHW with traditional medicine	CHW with hospital	CHW with private practitioner	Hospital only	Hospital with traditional medicine	Private practitioner alone	Gunia	Home treatment	TOTALS
I Total	0	29	9	2	2	8	6	10	36	102
%	-	28.4	8.8	1.9	1.9	7.8	5.8	9.8	35.2	—
II Total	0	2	9	0	0	11	6	2	12	42
%	-	4.7	21.4	-	-	26.1	14.2	4.7	28.5	—
III Total	1	3	8	1	10	14	6	2	2	51
%	1.9	5.8	15.6	1.9	19.6	27.4	11.7	3.9	3.9	—

Table - 8 : Peoples awarness of Preventive activities of CHWs in intensive study villages and his Private Practice

	Activity house holds		Category I				Category II				Category III			
			1	2	3	4	1	2	3	4	1	2	3	4
I	Chlori-nation	Total	72	1	5	24	21	1	2	18	27	7	6	9
		%	70.5	0.9	4.9	23.5	49.9	2.3	4.6	42.8	56.8	13.7	11.7	17.6
II	MCH Services	Total	97	0	5	—	42	0	0	—	49	1	1	—
		%	95.0	—	4.9	—	100	—	—	—	100	—	—	—
III	Source of information regarding prevention	Total	67	5	30	—	32	0	10	—	22	2	27	—
		%	65.5	4.9	29.4	—	76.1	—	23.8	—	43.1	3.9	52.9	—
IV	Private practice	Total	43	29	30	—	30	7	15	—	37	2	—	12
		%	42.2	28.4	29.4	—	47.6	16.7	35.7	—	72.5	3.9	—	23.5

Codes :

I
1. Don't know/He does not chlorinate wells.
2. He chlorinates wells.
3. Ws use Jhiria/river
4. Chlorinates occassionally

II
1. No
2. Yes
3. Don't know

III
(1) Neighbours, friends and their own observation
(2) = CHW
(3) = Paramedical worker with or without others.

IV
(1) Give free medicine
(2) Charges for injections
(3) Don't know.

(*Contd. from page 94*)
of the population and control most of the health institutions, and the majority of the population (lower-middle class and working class) who represent 80 per cent of the population and who have no control whatsoever over either the production or the consumption of those health services. To focus then as Illich and majority of social critics do, on the conflict between consumers and medical providers as the most important conflict in the health sector, is to focus on a very limited and small part of the actual class conflict.

One of the functions of the services bureaucracies - including the medical bureaucracy - is to legitimise and protect the system and its power relation. One aspect of that protection is social control — the channelling of dissatisfaction which Illich introduces as structural iatrogenesis. But to believe that social control is due to the culture of medicine and the pervasiveness of industrialisation is to ignore the basic question of who regulates and most benefits from that control. An analysis of our societies shows that the service bureauracies — including the medical care ones - although willing accomplices in that control, are not the major benefactor. The ultimate benefactor of any social control intervention in any system is the dominant class in that system.

In short the major suggestion of Illich for solving our problems is self-reliance, self-care and autonomy of the individual - what can be described as lifestyle politics. This philosophy strengthens the basic ethical tenets of bourgeois individualism. Moreover, the lifestyle approach to politics serves to channel out of existence any conflicting tendencies against those structures that may arise in our society. The strategy of self-care assumes that the basic cause of an individual's sickness or unhealth is the individual citizen himself, and not the system and therefore the solution has to be primarily his and not the structural change of the economic and social system and its health sector. Contrary to what Illich and others postulate, the greatest potential for improving the health of our citizens is not primarily through changes in the behaviour of individuals, but primarily through changes in the patterns of control, structures and behaviour of the econmic and political system. The latter could lead to the former. But the reverse is not possible. Actually, it is precisely because of the impossibility of the reverse, and thus the lack of conflict between Illich's message and the basic tenets of the capitalistic economic system that his message, the lifestyle politics is and increasingly will be presented by the organs of the media as the resolution of our crisis and problem.

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The People

(Excerpts)

Pablo Neruda

That man I remember well, and at least two
centuries have passed since I saw him :
he travelled neither on horseback nor in a
carriage — purely on foot
he undid
the distances.
carrying neither sword nor weapon
but nets on his shoulder,
axe or hammer or spade;
he never fought with another of his kind –
his struggle was with water or with earth,
with the wheat, for it to become bread,
with the towering tree, for it to yield wood,
with the walls, to open doors in them,
with the sand, constructing walls
and with the sea, to make it bear fruit.

I knew him and still he is there in me

. . . . . .

. . . . . .

Where he lived everything
a man touched would grow :
the hostile stones,
hewn
by his hands
took shape and form
and one by one took on
the sharp clarity of buildings
he made bread with his hands
set the trains running,

. . . . . .

. . . . . .

I think that those who made so many things
ought to be masters of everything.
And those who make bread ought to eat !

And those in the mine should have light !
Enough by now of grey man in chains !
Enough by now of the pale lost ones !
Not another man will go past except as a ruler
Not a single woman without her diadem

. . . . . .

. . . . . .

Someone is listening to me and although they
do not know it,
those I sing of, those who know
go on being born and will fill up the world.

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SYSTEMS OF MEDICINE

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WHITHER OTHER SYSTEMS OF MEDICINE ?

India, like other ancient civilisations of the world, had several highly evolved and sophisticated systems of medicine long before the advent of the so-called modern or allopathic system. Historical forces, such as the Greek and Muslim migration into the subcontinent, brought with them yet other systems which flourished and grew, with a mutually beneficial cross-fertilisation of ideas and techniques. Alongside these 'formal' systems of Ayurveda, Unani and Siddha (formal in that they had written treatises and established universities for teaching and training), was the rich, varied and location-specific lore of folk medicine and folk psychiatry, based on local plants, herbs and belief systems. Tribal medicine, and the home remedies of 'Ajji cha batva' (grandmother's purse) fall into this category. Another vital source of indigenous health care were the traditional midwives or 'dais', who not only performed the important function of birthing, but also abortions, in addition to advice and aids for contraception.

There is considerable controversy regarding the role of these systems and their practitioners in history, and indeed about the impact of the arrival of western medicine on them. Some scholars argue that the latter was primarily responsible for the atrophy and decline of traditional medical systems, even stating that the British sought to systematically destroy them on the grounds that they lacked 'scientific' bases and were filled with superstitious nonsense and positively harmful remedies. Others feel that this is too simplistic a view, and that some of these systems were in decline long before western medicine arrived on the scene.

This indicates the need for critical research into the social history of the pre allopathic systems of medicine. We need to understand their interaction within the socio-political context of different historical periods. What, for instance, was their ideological framework, and how did this reflect contemporary socio-economic and political structures ? The question of 'scientificity' is also often raised. But it can be established that even pre-allopathic systems were scientific, if the term means posing questions, seeking their answers through methodical study (using the means available at the time) and accepting a thing as true only if the same result is repeatedly derived. But this spirit of enquiry and experimentation seems to have gradually declined. Why this happened, whether it was the lack of concurrent technological development to facilitate it, or due to socio-cultural, economic and political forces, is what must be determined.

In this context, it is worth considering exactly how one measures the role of a given medical system, and how one assesses whether it has declined, remained or grown. One must address this question at two levels : first, at the level of theory. What is the extent and nature of growth of the theoretical base, both in depth and breadth, over a period of time? Second, at the level of practice, are the practitioners of a system growing in number, and hence the number of recipients of that type of care?

Evidence shows that upto Independence, the availability of allopathic treatment was largely limited to the cities and towns, and that too mainly to the higher socio-economic groups. If this was the case, then certainly the practice of other systems was not seriously affected since the majority of people, especially the poor, continued to rely upon them. But at the level of theory, the 'formal' systems at least seem to have suffered from stasis and decline, and perhaps because of the following two reasons : one, state patronage by Indian monarchs, which had provided the chief source of support for theoreticians and researchers, was not forthcoming from the British. Two, the growing intellectual domination of western science and thought, especially among the Indian elite, reduced the legitimacy and credibility of nonallopathic systems.

This situation did not change drastically even after Independence. The commitment of the post-Independence leadership to 'modernising' India, to promote (Western) science and technology in the country, and to provide 'modern' health services to all, ensured that state patronage would continue to be given to allopathy, whose practitioners had by then become a powerful lobby alongwith the pharmaceutical industry. Only the residue of the Swadeshi movement, and those leaders (like Gandhi) who were fervent advocates of indigenisation, ensured the allocation of some limited

resources for the development and strengthening of other systems of medicine.

Notwithstanding this, the status of traditional systems is fraught with confusion and subject to periodic swings. The major trends, however, seem to be the following:

The 'synthesis' school of thought which argues that the best of each system—including allopathy—should be studied and combined to create a 'National System of Medicine' (this manifests the heavy influence of the Chinese model). The 'purists' feel that this is both impossible and fatal to the future of traditional medicine. Fatal because it would result in the irrevocable decay of the non-allopathic systems, since allopathy would dominate both theory and practice; and impossible because the conceptual frameworks of the different systems are inherently incompatible, and thus they cannot be studied or evaluated using an alien methodology. Each system must be left severely alone to go in its own direction. Still others argue that the whole question of 'system' is irrelevant; what is needed is a safe, effective and affordable range of therapeutics for use in mass health care. If traditional medical systems have useful remedies which fit the bill, then they should be utilised without recourse to philosophical arguments. Finally, the 'modernists' within traditional medicine feel that the only way to restore their legitimacy is to apply the techniques of modern science to research and standardise these therapies and remove the cloak of mysticism from about them.

These differing and sometimes warring schools are scrabbling for a slice of an already minute cake. The last four decades have witnessed the growth of a plethora of indigenous medical schools, professional bodies, and research centres.

At the same time, these indigenous institutions, their teachers, students, researchers and administrators, generally suffer from an inferiority complex vis-a-vis their allopathic brethren. A 'keeping up with the Joneses' syndrome thus develops, based on the rationale that by acquiring the characteristics of allopathy, the indigenous systems will regain recognition. One example of this is the widespread use of allopathic drugs by indigenous practitioners, made possible by the relatively easy availability and rapid action of these drugs. Non-allopathic practitioners argue that with the spread of and exposure to allopathy, people have become impatient with the slower-acting indigenous therapies which, if properly prescribed and taken, demand more from the patient (like dietary and life-style changes) than allopathic treatments. This is also an interesting comment on the marketing strategies and ethics of the allopathic pharmaceutical industry. Another sign is the 'me too' phenomenon in the growing indigenous drug industry, which is developing, producing and marketing non-allopathic drugs and pharmaceuticals at a rapid rate—particularly vitamins, tonics and restoratives.

Therefore, while the indigenous medicine infrastructure is larger and stronger than it was at independence, it suffers from the same diseases which afflict modern medicine in India—commercialisation, mystification, professionalisation, rising costs and curative bias. The only difference, perhaps, is that its controlling elite is more fragmented and less cohesive in its functioning and goals.

What, then, is the role of the various indigenous system in a people's health system? Should they all be clubbed together or does each one have a distinct and separate role? And what of Homeopathy, another imported system which has taken firm root in India and provides an important alternative especially in urban areas? Obviously, all these questions must be researched and cannot be fully answered at this point, but we can review existing information to throw some light on them.

For instance, it is useful to look at the ways in which people actually utilise these different systems (where they are available) at grassroots level, to see if these use-patterns provide some clues. A few studies of this type were undertaken in the 'fifties and the 'sixties in Punjab, UP and Karnataka. Interestingly, most of them found one common thread: people's use of alternative health care sources was highly rational. By and large, allopathy was used for acute conditions and for those diseases where it offered known cures—such as TB, malaria, and infectious diseases. Ayurvedic, Unani and herbal treatments were sought for chronic ailments like skin diseases where these systems offer far more effective therapies than allopathy. And home remedies or folk cures were resorted to for simple self-limiting complaints like colds, coughs, diarrhoeas and fevers. Of course several factors like cost, distance, attitude and behaviour of the providers influenced (perhaps more strongly than cure-effect alone) the choices people made. But essentially, the strengths, weaknesses and relative benefits of each system seem to be perceived quite clearly by people.

Unfortunately, there is a growing feeling (though little documented evidence) that this situation has undergone considerable change in the past decade or two. One of the main reasons is the greater penetration of allopathy into rural areas as a result of the overproduction of MBBS doctors who find private practice unlucrative in the saturated city market and opt for rural areas as comparatively profitable. This phenomenon has resulted not only in increased availability of allopathy in the rural private sector, but also an exposure to its rapid-fire remedies. Thus more and more people have been 'hooked' onto treatments which are either wrongful applications or overuse of valuable, even life-saving interventions. The prime examples are the preference for injections over oral medication and the demand for overnight cures which bring their own costs through widespread drug-resistance and toxic side effects.

What then are the tasks ahead of us if we wish to rid indigenous and other systems of medicine of their present ills and make them part of a radical people-based health care system?

First and foremost, it is clear that no changes within these systems nor in their role in health care can occur without corresponding changes in the role and nature of allopathy. The battle on both these fronts must be based on similar strategies : major structural changes in the socio-economic-political system which controls and shapes (or distorts) all of medicine and health care.

Within the health care sector, the following steps would then perhaps bring us closer to the goal : first, demystification and popularization of all medical knowledge, regardless of system. This may in fact be easier with traditional medicine, whose basic concepts are closer to people's beliefs and health culture than those of modern medicine. Second, the trend of professionalisation must be reversed. Since a significant part of indigenous therapeutics is based on herbs and dietetics, they lend themselves to decentralised cultivation, production and distribution. Axiomatically, the commercialisation of traditional drugs and pharmaceuticals, particularly for producting useless vitamins and tonics, must be stopped. This should only be permitted where the economy of scale and geo-climatic limitations favour centralised production, and that too for really useful remedies which are needed for mass health care. This will keep indigenous medicines within people's reach, and discourage the growing consumerism which is being cultivated by vested interests in order to market phony, expensively-packaged medicaments. Finally, a massive re-education of the people is necessary to wean them from dependence on the rapid-fire cures which unscrupulous practitioners (especially of allopathy) have used to win their faith.

Finally, there is one more important issue which must be examined with reference to indigenous systems of medicine : the question of gender bias. Sexism in indigenous systems is a completely uncharted area which demands exploration. Much has been written about the gender-biases in the theory and practice of modern medicine, but how do other systems view women? This question must be studied at three levels : 1) Is there a gender bias in the conceptualisation of women's health and disease in other systems? 2) Is there a sex-distinction in their therapeutics and in the delivery of care to women? and 3) Is there discrimination against or decimation of women practitioners of indigenous systems, including folk and tribal medicine? And if so, are pressures arising from within the system, or from the spread and influence of allopathy?

There is an urgent need to study these questions and, if necessary, sensitise non-allopathic systems to the special health problems and needs of women. This is all the more crucial since traditionally, popular medical knowledge and wisdom was largely the preserve of women, but this rich resource is being eroded and lost. Organised medicine systematically discredits it, without offering an adequate substitute. Thus women are losing their traditional source of self-care (especially poor women), but with nothing to replace it but a growing dependence on a health system which throws them its crumbs.

In this issue, we present articles which focus on the debates and controversies about traditional medicine, its role and relevance. Dhruv Mankad attempts a dialectical analysis, using the Chinese experience as an illustration. Sujit Das and Smarajit Jana's analysis presents a contrasting view. Ravi Pathak describes the grass-roots practitioners' perspectives. We have also reproduced two articles from *Social Science and Medicine*, Roger Jeffrey's which gives an historical account of the policies towards indigenous healers, and Catherine Mac Donalds' which examines the political economy of traditional systems. In addition, we present Anant Phadke's article which looks at the role of doctor's

organisations in the context of their recent struggles (this article was held over from the previous issue). We hope these articles will stimulate further discussion and research.

— Srilatha Batliwala
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A DIALECTICAL APPROACH TO TRADITIONAL MEDICINE

A Lesson from the Chinese Experience

dhruv mankad

The main protagonists in the debate on traditional medicine are the 'traditionalists' and the 'modernists'. The former argue that traditional medicine was suppressed by the colonising powers and should now be revived; the latter feel that traditional systems are inherently inferior to modern medicine which is more 'scientific' and therefore the best choice for the future. But both views, the author contends, are rooted in contradictory philosophical standpoints, and attempts to find a dialectical approach, using the history and development of Chinese medicine as an illustration. The discussion is in three parts: the first critiques both standpoints and contains a general discussion of the dialectical approach; the second and third parts attempt to illustrate the concrete application of this approach in Chinese medicine.

Extensive debates, often eluding any resolution, have been going on especially in the erstwhile colonies, regarding the exact status of traditional medicine as a science. On the one hand it is argued by the 'traditionalists' that traditional medicine has been suppressed by their respective colonisers and this has led to its decline. It should be extended institutional as well as financial support and developed further. On the other hand, the 'modernists' argue that modern medical science has made tremendous strides in knowledge regarding the human body, its diseases and their treatment. Thus, they consider it naturally superior to traditional medicine. The former reject modern medicine as being culturally alien and hold traditional medicine as having exclusively developed within the culture and thus the only appropriate system of medicine (cultural relativism). The former favour development of modern medicine only, as being the only scientific medicine devoid of any cultural and ideological factors (neutralism). Both views are rooted in two contradictory philosophical standpoints.

In this paper, we shall endeavour to identify the two standpoints, analyse them in the light of the nature of scientific knowledge and find a dialectical approach to this problematic; using chinese medicine as an illustration.

The paper is divided into three parts. Part I deals with general questions on the nature of scientific knowledge and analyses the two standpoints mentioned above and contains a general discussion on a dialectical approach to this problematic. Part II and III deal with the concrete application of such an approach as seen in the development of Chinese medicine. Part II deals with the historical background and philosophical basis of medical science in People's Republic of China and socio-economic and political determinants informing upon its development, while Part III deals with the current implication of the policy of combining western and traditional medicine in the People's Republic of China.

I. Nature of Scientific Knowledge

Like any other science, medical knowledge too, has not developed in a unilinear, orderly, from a lower to a higher level evolutionary fashion, but its history reveals a zig-zag path of development interspersed by many breaks and jumps. In other words, science, instead of developing from a primitive level to its modern state by a careful, logical, screening of available 'objective' facts and later rejection of those not found to be true, has, having proceeded in one direction, taken an entirely different path later. No direct, internally consistent logical connections may be found between these paths. The essential aspect of these breaks and turnabouts has been the transformation of world-views, the sudden shifts in the attitude towards nature and the man-nature relationship. That is to say, these breaks are essentially philosophical in nature.

These breaks were the consequence of a struggle between different, often contradictory schools of philosophy. In this struggle, the school which fulfilled the ideological needs of the ruling class dominated the rest.

Now, if science is defined as a rational body of knowledge gathered by human beings during the social production of their material (and non-material) conditions of existence, then science (not with a capital S—the modern bourgeois science having an absolutised abstracted existence in the capitalist society) has been with human society since its very

inception. So has been medical science. An outgrowth of animism, wherein all diseases were seen as a result of inflictions of evil spirits, it was one of the earliest sciences. Human being's intercourse with nature produced on the one hand empirically verifiable facts having an objective existence, and a universal truth value. It also produced various concepts, thought categories and logic specific to natural science with which these facts were organised and various levels of generalisations were achieved. These specific thoughts, categories and logic are influenced by thought categories and logic of thinking process in general. That is to say that they are rooted in philosophy. In fact, for a long time science was indeed a part of philosophy.

Now, at different points in history, both in time and space, this non-cognitive component is influenced by different cultural and ideological factors and is thus shaped differently. This may even result in establishment of different "facts" in different cultures. (Here one is disregarding the question of validity and truthfulness of these 'facts'). Thus, for example 'geomancy' the chinese science of wind and water which determines placement of house and tomb with respect to features of landscape and aesthetics of land use, has no counterpart at all in western science (Elzinga and Jamison, 1981). The development of both the facts—the content and the concepts, thought categories and logic with which they are organised—the form—takes place in an interpenetrating, dialectical fashion, each deriving support from the other. Many a times the development of facts comes into sharp conflict with the concepts leading to either transformation of the concepts themselves or to distortions of facts by ideological rationalization of the conceptual form. What happened to Ayurveda in India during the Medieval period was the latter. The anatomical, pathological and pharmacological insights gained by generations of experimenting physicians were distorted by the use of concepts like Karma Siddhanta, divine will, and transmigration of souls etc. On the other hand, the scientific revolution of the 17th century Europe was an example of the former when entirely new forms of logic was developed by Comte, Descartes, Bacon, Newton and other philosopher-scientists.

While the ideological rationalization of Ayurveda suited the purpose of the Brahmin-dominated, varna-jati based feudalism in a decadent state, the scientific revolution in Europe was in response to the growing strength of the European commercial and industrial bourgeoisie.

Thus the factual component and the conceptual component of scientific knowledge exist in a dialectial relationship, under constant tension and under the influence of ideological and other factors operative in the culture and the historical period of its orgin.

This view is debated from two standpoints, positivist and cultural-relativist.

Positivist Standpoint

The basic tenet in positivist philosophy is that the scientificity of a proposition lies in its anchorage in empirical statement of facts. Therefore, the central part of a positivist programme is to build a theoretical structure which is understood in term of its interlinking with empirical statements. It does not allow for any hypothesis which cannot be or has not been verified empirically and objectively. This absolutisation of empiricity and objectivity results in a narrow delimitation of what can be called a Science. In particular, theories operative in premodern knowledge producing practices such as alchemy or Ayurveda that does not match upto some piece of modern science, falls outside its realm. They are not even considered as hypotheses yet to be verified.

Francis Bacon advocated a ruthless rejection of old 'idois' inherent in all the preceding knowledge systems but his methodology reinforced all of them by absolutising the objectivity of scientific knowledge. The attitude of positivism towards all the other knowledge-producing practices can be summed up, in his own words :

"It is idle to expect any great advancement in science from the superinducing and engrafting of new things upon old. We must begin from the very foundations, unless we would revolve forever in a circle with mean and contemptible progress" (Bacon, 1620).

This fetishism of facts has had the obvious consequence of converting science into scienticism with the metaphysical principles of objective consciousness basing itself in an alienating dichotomy of observing subject and observed object, the invidious hierarchy of nature which places man at the top and legitimises an experimental inquisition of nature, ... the mechanistic imperative that says that everything that can be known should be known and that such knowledge should be utilised regardless of consequences (e.g. genetic engineering unnecessary and unethical human

experiments —DM), the extension of instrumental domination of nature to man himself" (e.g. excessive reliance on medical technology in health care) (Elzinga and Jamison, 1981).

Such a perspective when applied in medicine means that those traditional medical sciences which have not adopted the positivist principles of objectivity are considered unscientific. The theoretical concepts and prescribed therapies of these sciences not having been tested under the modern, laboratory –'Controlled'—conditions are rejected as invalid. Concepts like acupuncture points or tridosha in Ayurveda, which have no counterpart in modern medical science, are considered as non-existent. Even when, as in the case of acupuncture points, the functional if not the anatomical existence of a point, is demonstrated, it is not accepted. Thus the most 'advanced' scientific mode of enquiry into nature ends up by denying nature ifself if it does not fit into its theoretical straitjacket.

Cultural Relativist View Point

From the other end, the opposite view point considers that the general concepts of sciences, the value promoted by them and the 'ideal' of what constitutes valid and proper knowledge differ from culture to culture. The cultural relativisits argue that modern science is the cultural artefact of the west while ayurveda, astrology and others are oriental sciences. Thus, every science is considered to be an ethnoscience, having a theory, a logic and verification techniques of its own, specific to itself and thus, incommensurable. For example, they argue that the efficacy of ayurveda must be assessed by the principles laid down in ayurveda only i.e. on its own terms, and not on the terms dictated by modern science. They rule out any 'objective' assessment standing outside the premises and logic of ayurveda. They point out that "it is only when domination over nature is considered the highest ideal for civilization that we find western science becoming the universal standard for measuring the achievement in all the other cultures. However if we take the unity of man and nature as a predominant positive value, the Chinese and other cultures' scientific tradition stand out as more advanced". (Alvares, 1979).

While sympathising with the eagerness to do justice with the achievements of pre-modern societies including those of Egypt, China and India, one must be wary of the dangers of slipping into an extreme form of such relativism—a position denying the basic equality of human experience and universality of certain scientific findings independent of geographical and cultural factors. Though it is true that science and technology of various civilisations should be understood on their own merits and not as abortive developments towards modern western science or worse as mere fiction, one must be cautious of how one formulates this point. "There is a danger ... of denying of the fundamental continuity and universality of all sciences. This could be to resurrect the ... conception of the various non-European civilization as totally separate, immiscible thought patterns ... a series of different views of the natural world, irreconciliable and unconnected." (Needham, 1954).

Thus, from the opposite end, the relativist view reinforces the positivist view that pre-modern and non-European sciences are different from modern science and thus incompatible. They differ only in their views regarding the relevance of these sciences. The positivists consider them as unscientific and thus irrelevant, while the relativists maintain that each are relevant only in their own culture.

This assumption of a basic incommensurability also implies that one must deny the contribution of these cultures to the universal body of knowledge, which is international. It also imparts a closeness to knowledge, the boundaries being limited by the culture. In fact, modern science is 'ecumenical', in the sense that historically speaking science is a product of diverse cultures and thus a common property of human kind. Secondly, this assumption denies any possibility of mutual exchange, thus legitimising elitist doctorines in each of these sciences. It also rationalises the doomsayer's conservative prophecy depicting modern science an uncontrolled and uncontrollable monster causing all the wars and social ills of our time. The only alternative such a view of modern science leaves is a total withdrawal into inner reality, an escape into 'privatised mystical experiences' aimed to create an 'inner' revolution. Thus, positivism and cultural relativism absolitise and/or universalise the form of scientific and technological development without considering the social context and the content of the various stages of its development

A Dialectical Approach

A dialectical approach to the problematic assumes that a) all knowledge is universal and humankind's common property; b) no scientific theory or methodology is perfect or unchanging and thus 'inherently' superior; c) science develops under the influence of a philosophical basis

generated within the framework of various socio-economic, political and cultural factors in interaction. Therefore, even though direct comparisons may be difficult, because theoretical systems in each cultural setting were different, nevertheless mediated comparison is possible.

This could be done "by testing out the theories of traditional sciences in the light of modern concepts, without absolutising the latter and by studying how and how much the former had succeded in discovering natural processes and in putting them in service of humanity" (not in order to achieve mastery over nature or human beings but for the benefit of all). Such a view opens up a possibility of integrating western and traditional sciences and a mutual exchange between the two. Having evolved under different historical and cultural conditions each embody different sets of strong points and limitations. The aim of such an integration is to reinforce each other's strong points and do away with the limitations.

Such an integration can contribute to the advancement of human knowledge in three ways:

— regional traditions embody useful concrete techniques, for example traditional herbal and mineral remedies that work without the side effects of many chemically manufactured drugs.

— regional traditions preserve an important body of data which can serve as a base for furthering existing fields of modern scientific research — examples are records of astronomers and meteorologists.

— regional traditions can open up new perspectives and avenues for modern scientific research, as in the case of acupuncture which has stimulated international neurophysiological research. (e.g. work on mechanisms of pain inhibition) (Elzinga and Jamison, 1981).

Such an endeavour demands a change in the world view and in the attitude towards history of science.

Only a dialectical understanding of the history of science, its relationship with philosophy and social context can produce the required 'break'. Such a conscious re-evaluation of the history of science also reveals a different future vision of an integrated science, wherein all the pre-modern and non-European sciences would find that their legitimate contributions have transformed the existing scientific knowledge and in turn have transformed themselves.

The most widely discussed illustration of such a process is Chinese medicine. A change in the implicit world view of existing medical science—both modern and traditional—led to an integration and development of both the sciences. The most notable product of this development is acupuncture. In order to study how this happened we shall briefly trace the history of Chinese medicine.

Historical Background of Chinese Medicine

Chinese medicine is one of the oldest known medicines. Very little is known about its origin but like stone age medicine elsewhere it must have begun as a primitive medicine. Archaeological evidence shows that the earliest inhabitatnts of the Yellow River Valley were people of the Stone Age and like the religious beliefs of other tribes of Stone Age, animism and demonology must have been the characteristic feature of their religion. We may safely 'assume' that they believed in the spirits of the dead, and worshipped natural events like thunder, rain etc. Their medicine too must have consisted of witchcraft, sacrifices and oblations. The situation changes later, during 1200-300 B.C. when their religion enters the age of philosophy. From being direct and immediate response to the multifarous problems including illhealth faced by the primitive being, it enters a stage where the Chinese human being has formed a metaphysical view of the universe, of man and nature relationship. Medicine too is influenced by this change. Witchcraft gives way to institutionalised medicine using processed drugs. It is seen that during the Chou dynasty, (1100-250 B.C.) physicians incharge of internal medicine, surgery and veterinary medicine were appointed (Wong, 1979).

The oldest legendary figure in Chinese medicine is Shen Nung (2757 B.C.) who is venerated as the father of medicine and is considered to be the inventor of drug lore. The oldest treatise extant is *Huang Ti Nei Ching Suwen.* (Yellow Eineror's Inner Classic). Though *Nei Ching's* period is around 2000 BC, the treatise is supposed to have been written around 200 BC. It is believed to have been written by several anonymous authors over the period. It is a theoretical exposition of the basis of health and illness, closely related to the cosmological ideas taking shape during the philosophical period. It lays down the basic principles of anatomy, physiology, etiology of diseases and their treatment (Wong, 1979).

Chinese medicine begins to assume a rational, scientific character during the Han dynasty (200 BC-220 AD) with Tsang Kung, Chang Chung King and Hua To as central figures. Tsang Kung lived

around 170 BC and left records of personal observation of twenty five clinical cases. Chang Chung King's treatise of fever marks a new era in Chinese medicine. He has described many types of fevers including typhoid fever in this treatise and it contains one hundred and thirteen prescriptions. With this treatise, the diseases were studied more from clinical standpoint—signs and symptoms, course of an illness, treatment and actions of a drug rather than from the point of view of the theories of diseases as was the case during earlier period (Kuttumbiah 1971). This transition shows that a scientific outlook was permeating medicine in the grips of speculative philosophy.

The third important text is *Pen Tsao* which describes useful plants, animal and mineral substances and their applications. Unlike *Nei Ching* it is a practical text and has undergone many additions over the centuries as the experience of the Chinese physicians of using herbs and minerals accumulated. This period saw a great intellectual flowering in China. Confucius and Han Fei belong to this period. Though a surgeon, Hua Tu is claimed to have discovered anaesthesia and to have performed some major and minor operations like laparotomy, venesection etc., this aspect of medicine had fallen into neglect during the later period for reasons discussed elsewhere.

Although the pharmaceutical traditions of *Pen Tsao* expanded, the *Nei Ching* remained less emendable because of its classic and semireligious status. Both, the Chinese feudal rulers and the physicians themselves looked upon it as a divine gift. After the Han dynasty, this resulted in Chinese medicine, becoming not stagnant, but backward looking toward the sources of classical antiquity and hence continuing to develop within the thoretical framework based on the philosophy of that period.

This backward-looking character of Chinese medicine made it particularly vulnerable to the cultural aggression of the imperialists during the 19th century. During the rule of various imperialist powers overwesternization was stressed and rivalry was set up between Chinese and Western medicine. Maligning the former as unscientific and a 'stumbling block' to the development of modern medicine they barred practitioners of traditional medicine from city hospitals and medical colleges. The Kuomintang government in 1929 put forward measures to aboish Chinese medicine. Among these were "restrictions on the practice of medicine by traditional physicians, a ban on setting up schools of traditional medicine and on publishing books and periodicals on Chinese medicine" (Li and Tsai, 1977).

It was in the face of Nationalist Blockade, during the liberation war, that efforts were made by the Chinese communists to utilise the locally grown herbs. In 1940, when liberated zones were established, this pragmatic step was taken up as a conscious policy of utilising indigenous medicine. (Liberated Zones were those areas in China where the Communist-led Revolutionary Committees had usurped political power from the Kuomintang government). This policy received official recognition when Mao Tse-Tung in his famous speech in 1944 at the Yenan conference on culture and education, urged the doctors to work with and elevate the scientific level of traditional practitioners in order to better serve the people (Mao., 1965). However, after liberation in 1949, the communist government continued to have traditional practitioners as auxiliaries to the modern medical forces. The directive of unifying the two systems of medicines was probably interpreted as giving the traditional practitioners some training in modern medicine. It was only in 1955, when efforts were made by the communist party to raise the status of traditional medicine. Traditional doctors were brought to city hospitals and clinics. Special wards were set up for acupunture and herbal medicine. Modern doctors were urged to learn from their traditional colleagues.

By 1958, thirteen new colleges for traditional medicine were opened. Over 50,000 students apprenticed themselves under distinguished traditional physicians. In 1955, a well-equipped Chinese Medical Research Institute with both modern and Chinese doctors on its research staff was setup. The entire body of knowledge was to be investigated.

In other words true integration of the two systems of medicine at theoretical as well as practical level was the goal.

The praise and support to traditional medicine reached its acme during the Great Leap Forward (1958-59) period. This period was characterised by over-enthusiastic policies of collectivisation of individual agricultural plots, formation of communes etc. This resulted in a reduction in the production of foodgrains and led to subsequent famine in some areas. With the retreat of its extreme policies, emphasis on traditional medicine also declined. Although the policy of combining the two kinds of medicine showed some triumphs notably in the

fields of resetting of fractured limbs using mobile splints, (Sheng, 1977) no major theoretical breakthrough towards a new synthesis was in sight.

With the advent of Great Proletarian Cultural Revolution, traditional medicine again came to the forefront. This period was probably the most turbulent one in the contemporary history of China. In 1966, the Chinese youth led by Mao, rebelled against dogmatism, bureaucratism and elitism of sections of the Chinese Communist Party, the government and other institutions. With the decentralisation drive, provinces and communes assumed responsibility of health services. Self reliance was the official policy, which meant depending upon local resources which often in rural areas meant traditional medicine and using locally grown herbs. Since then, by using combined traditional and modern medicine, many breakthroughs at both theoretical as well as applied level, have occurred especially in acupuncture analgesia, treatment of deaf, mute and blind (Chen 1973) and in nonsurgical treatment for conditions normally requiring surgery (e.g. perforated peptic ulcers) using acupuncture and traditional herbal medicine (Wu, 1977).

Thus, it should be noted that the introduction of modern medicine in China was not as a consequence of a natural transition from traditional Chinese medicine nor was it as a result of any 'inherent' superiority of modern medicine.

(It should be kept in mind that modern western medicine in 1929 when Kuomintang sought to suppress the traditional Chinese medicine, had in its therapeutic armentarium a few herbal tinctures, like Belladonna and Gum Acacia, few mineral preparations like Arsenic and Mercury and dangerous procedures like purgation and leching.) It was forced upon the colonial people. Ideological struggle has played a dominant part in the development of medicine everywhere and in China in particular.

This raises an important ideological question as to how the dominant philosophy of Chinese communists could reconcile with that of the traditional Chinese medicine. The answer lies in points of congruency between the philosophical basis of Traditional Chinese medicine and the Chinese interpretation of the dialectical materialist philosophy.

Philosophical Basis of Chinese Medicine

Chinese medicine assumed a scientific character in a period characterised by flourishing of great schools of philosophy: legalism, Confucianism' Taoism, Yin-Yang and five element school and Naturalism. Developments in medicine have been influenced by all of them to some extent, but its scientific theory owes a great deal to the last three.

Although differing in many ways over their general world-views, there are certain common points regarding man-nature relationships, in all the philosophical schools of this period. Man is conceived of not as a master of nature nor as its slave but as an integral part of a cosmic system having harmony and order. Confucianism admits a hierarchy of heaven-man-earth where all the human and earthly events are willed by heaven which imparts to it harmony and order. In other schools, motive force of the cosmic order is considered as spontaneous internal self-movement rather than mechanical impulses from outside. This tendency to analyse phenomena in dialectcial logic is reinforced by the Chinese language, it is claimed. Rigid 'A or not-A' categories are avoided (Needham, 1976).

According to ancient Chinese philosophy, in a healthy body there should be free flow of *Chi* (the basic principle of the entire universe) which is governed by the interplay of two opposite forces, the *Yin* (negative) and the *Yang* (positive). Disease results from their imbalance. *Yin* and *Yang* themselves evolved from nothingness which was the grand beginning of the Universe. Quantitative transformation of *Yin* into *Yang* or vice versa causes change.

Yin and *Yang* subdivide into five elements—water, fire, metal, earth and wood. Since the human being is conceived of as a product of Heaven-accumulated *Yin*, and Earth-accumulated *Yang*, the human being too, contains the five elements. *Yin* and *Yang* are not considered to be absolute and static.

The *Yin* and *Yang* concept is an example of conceptualisation in terms of contrariness, unity and transformation of opposites. One contemporary Chinese author maintains that dialectics in ancient China dealt with the interinfiltration, interdependence and mutual supplementation of Yin and Yang, the opposites of a contradiction .. (and) self adjustment of the system, which keeps the whole organic .... structure dynamically balanced. The keynote of the five Elements theory is that there is *Yang* in *Yin* and *Yin* in *Yang* functioning together and that, therefore neither of them alone can generate new things. (Li Zehou 1980).

Thus, like dialectical materialism, the philosophy of traditional Chinese Medicine, too deals with transformation, contrariness and unity of opposites. The Chinese medicine operated within such a conceptual framework. And with this concept, it sought to analyse and explain various observations regarding the human body, its diseases and their treatment. The only tools available to them were their five senses and the accumulated experience. This limits the validity of the empirical evidence available in support of such theoretical concepts. Now, the support or its refutation, is sought by intergrating the traditional Chinese medicine with modern medicine. Its analytical and experimental techniques as well as its empirical methodology is to be utilised for the purpose.

Generally, the philosophy of traditional Chinese medicine encouraged scientific enquiry. But historically, as Chinese medicine has come under the influence of different schools of philosophy at different times and places, its progress has not been a smooth one. For instance, under the influence of Confucianism, the official philosophy of the feudal ruling classes of China, Chinese medicine degenerated into dogmatism. For, although all the philosophical schools conceptualise the contradictory nature of reality, they differ greatly in tackling this contradiction. Confucianism propagates balance and harmony –the unity of opposites, Taoism opposition and revolt—the contrariness of opposites, and Legalism transformation of harmony into disharmony and vice versa in a cyclic fashion. Each world view represents a class ideology, with Confucianism being feudal, the ruling class ideology during the classic period (Elzinga and Jamison 1977). "Confucianism blocked the germination of new ideas and hamstrung the development of ..... scientific discoveries in China ....." (Ren Jiyu 1980).

To understand how and why this process took place we shall have to go into the socio-political factors which influenced the rise of Confucianism, its subsequent pernicious effects on the development of Chinese medicine as well as the overthrow of this ideology.

Socio-Economic and Political Factors Influencing Development of Medicine in China

In the last section we saw that the traditional medicine in China was developing under a theoretical framework under the influence of Confucianism, Taoism and Naturalism. But it was Confucianism which set its stamp on it. Confucianism stressed balance of opposites in a contradiction thus legitimising the stability and order of the feudal hierarchy in Chinese society. It was the official ideology of the feudal state, with the result that new ideas which could disturb this balance were not encouraged and scientific enquiry was stiffled. "This backward trend was due primarily to the decaying feudal relations..... But stifling effect of Confucianism on man's urge to explore also contributed to the virtual halt in the march of science ..... That feudalism held on so obstinately in China must be accounted for in part by the drawbacks of Confucianism" (Ren Jiyu, 1980). In concrete terms, it meant that analytical and experimental techniques not only did not develop but were looked down upon because they involved a work of manual nature quite like that of artisans who were considered low down in the feudal social order. For the physician to attain any social prestige and economic rewards, he had to be identified with the clasicially learned literati who constituted the social and political elite in feudal China. A similar situation existed in medieval India also (Chattopadhyay, 1977). The prestigious Confucian doctor was not a physician in the real sense because he acquired the necessary knowledge by reading medical classics and treated others only out of humanitarian motives. Full time medical practice as a profession was considered unworthy of gentry status and mandarinate. Yet amongst the ordinary folks, many practitioners continued to base their medical practice on experience and direct observation.

This has had all the adverse conseuences for further development of medicine. It not only retarded surgery a messy business which even medieval European physicians left to lower class barber-surgeons, but also inhibited the development of supportive physical and biological sciences. (Crozier, 1973).

Thus it was no wonder that the radical movement that developed in China after World War I, rejected traditional medicine as a part of decadent feudal culture and society. Ever since then, traditional medicine, its rejection or its support, has become a political issue in China.

Several factors led to it being restored to a prestigious position. Firstly, having been faced with Nationalist blockade in the Liberated Zones, Chinese communists were forced to rely upon the traditional practitioners for medical care. Moreover, in the struggle against feudalism, traditional practitioners as artisans were considered allies of the proletariat

and the peasantry. Having gained some useful lessons during this period, the Chinese Communist Party after the liberation applied them in practice. There was an extreme shortage of trained medical personnel and traditional practitioners were too important a human resource to be rejected outright. Moreover, traditional medicine, after having been shed of its feudal ideology, was put forward as a symbol of national heritage. In the struggle against imperialism, this played an important part in rallying the people around the communists.

During the Great Leap Forward, when there was a drive to demystify technical expertise, traditional medicine with its folklorist features was particularly suited for the purpose. With 'mass line' (the term used by the Chinese communists to denote their stress on the wisdom of the masses—the peasants and the workers) in ascendency, scientific knowledge was not considered to be a monopoly of highly educated. During the Cultural Revolution too with its anti-expert political line, modern medicine associated with its western trained specialists came under severe attack and traditional medicine of common folk-peasantry got a new boost.

Thus, the traditional physicians have now been reinstated to a prestigious position. They are encouraged to study modern medicine and along-with their modern counterparts, to undertake research in various aspects of traditional medicine, using modern scientific methods.

In concrete terms, the integrated medicine now being practised is drastically different from either its original classical form or the conventional modern medicine.

III. Current Status of Medicine in China

Restoration of traditional medicine for the Chinese never meant rejection of modern medicine. Modern medicine continues to dominate all the aspects of medical care. In medical care, training and research, modern scientific methodology continue to be applied but now traditional theoretical and practical diagnotic and therapeutic knowledge is sought to be integrated with it.

For the Chinese "combining Chinese and western medicine does not simply mean addition of the one to the other and certainly not replacing Western Medicine... by (its) native counterpart or vice versa. What is meant is the organic combination of the two medicines filling the weaknesses of the one with the strong points of the other raising the level of both, eventually evolving a new medical science incorporating the best features of both" (Li and Tsai, 1977).

Integration in Medical Practice

In medical practice throughout China more resources are now allocated to traditional medicine. Special wards have been constructed in the existing hospitals and new clinics have been set up. The traditional doctor now has a major role in OPD and with no loss of reputation is now calling for x-ray films and laboratory investigations, and when needed, western consultation Grey, 1971).

Rural health centres are staffed by both the traditional and modern doctors both of whom having received some training in the other system. There is considerable co-operation between them in day to day practice.

Barefoot doctors rely heavily upon traditional therapeutics including acupuncture. A barefoot doctor's manual lists around 533 traditional medicines. (Sidel, 1973). Reports indicate that model hospitals (usually Red Army hospitals) stress combined use of both the systems. One hospital reported that since 1969, 70 percent of the cases were treated in this way (Crozier, 1973). Diseases claimed to have been treated in this fashion include jaundice, pulmonary tuberculosis, inflammation of kidney (nephritis), inflammation of veins (phlebitis) severe burns, facial paralysis and fractures.

The most spectacular results by using combined traditional and modern medicine are in conditions where previously surgery was required, for example in perforated peptic ulcer (a condition where due to interaction between the inner lining of stomach and the acidic juice therein, there is first a small ulcer on the inner lining of the stomach, which may later burst to become a hole through the stomach wall with gastric juice sprayed over into the abdominal cavity causing severe inflammation of the abdominal lining). In such a patient, complaining of severe pain in abdomen, the modern doctors ascertain the part affected and the kind of disease the patient has by careful history taking, clinical examination, x-ray and laboratory investigation. "The ability to accurately determine local pathological changes is the advantage of Western medicine's method of diagnosis. Where it falls short however, is in understanding and analysing the functioning of the patient's body as a whole." (Wu, 1973). The Chinese doctors then ascertain the general status of the patient by traditional

method. After a careful study, a method has been developed using traditional and modern indicators like temperature and pulse and so on to judge the size of the hole and extent of fluid exuded. If the hole is considered to be large and fluid abundant, then the patient is operated upon, otherwise he or she is treated with acupuncture and herbal medicine. (Wu, 1973).

The other prominent breakthrough achieved by using the combined methods is in the field of acupuncture anesthesia and treatment of fractures.

Theory and practice of acupuncture has undergone significant changes as a result of self-evaluation on the basis of modern scientific concepts. Older theories and principles not verified in practice have been relegated to secondary importance. For example in diagnosis and prognosis, greater emphasis is placed on effective acupuncture points and their relationship to the autonomic nervous system and less on the theoretical aspects of Yin-Yang, the meridians and the Five Elements (though the latter are not entirely rejected.) (Chen, 1973).

Thus, in late 1950's Chinese medical workers reviewed their experience of acupuncture in relieving toothache and sore throat. They applied the experience to replace anesthetic drugs in minor operations like tooth extracticns and tonsillectomy and achieved some success. The technique gradually improved with more points being discovered. Now success has been achieved with placing needles only on the ear, nose and face (Chen 1973). Many major operations like abdominal and chest surgery have been performed using accupunture anaesthesia.

Another achievement has been in the field of treating deafmutism and blindness, using acupuncture (Chen 1973). Traditionally certain points were considered forbidden for deep insertion. But experiments showed that deep needling of these points produced return of the power of speech and hearing. Acupuncture therapy is combined with high quality speech therapy.

Acupuncture has also been used successfully in treatment of toothache, tonsillitis, jaundice, epidemic influenza, voice paralysis and polio (Chen, 1973).

Similarly, in the field of treatment of fractures, combined therapy is found to be superior (Sheng, 1977). The fracture is diagnosed using X-rays. The broken bones are realigned using acupuncture anasthesia. Then, the fracture is managed by tying standardised bamboo splints used traditionally around the fracture site. Quite unlike the extensive immobilisation method of modern orthopedics, this method advocates combined rest and movement. This has resulted in better healing, and greater recovery of function, particularly of old, complicated fractures. The time of immobilisation is also greatly reduced.

No discussion on Chinese medicine today can be complete without the mention of prevention and treatment of mental illness in China. Quite unlike the western method based on Freudian thinking, the psychiatric care in China is based on the belief in man's ability to change given a sympathetic environment and education and re-education' (Sidel R, 1973), (Ho, 1974).

Since the Cultural Revolution, with increased emphasis on integrating traditional medicine, the western trained doctors have altered their psychiatric service to include traditional methods and political techniques. The methods currently in use are self-reliance, collective help, drugs, acupuncture, heart to heart talks, follow-up care, community ethos, productive labour and teachings of Mao. Thus the process involves hospital and community care, individual and group relationships, professional and nonprofessional help, mutual help and self-reliance and traditional and Western medicine. Here again one clearly sees a tendency to avoid stressing on either of the opposites.

Integration in Medical Research

Scientific research in China is guided by four principles (Stuttmeir 1973) (1) Research must serve production and solve practical problems generally. (2) The indigenous, social, economical and intellectual — both contemporary and traditional experiences must be tapped. (3) Research must involve the masses and should not be a monopoly of the professional elite. (4) It should be an integral part of Chinese way of life. Struggle for scientific experiment, struggle for production and class struggle are considered three major tasks of a revoluntionary society. Medical research too, derives its orientation from the above principles.

The most outstanding feature of medical research in China is the concept of systematic co-operation built around small research projects. Research units having common interests work together regardless of their affiliations. For instance, production of new antibiotic 'Qingdmycin' according to the New China News Agency, was a result of combined

efforts of 36 agencies. The central body responsible for the medical research in China, the Chinese Academy of Medical Sciences maintains linkages with 24 different research institutes. The research areas include various specialities in the medical field like epidemiology and microbiology, surgery, pediatrics, pharmacology; areas in community and social medicine like environment. nutrition, labour hygiene, labour protection, occupation health, basic sciences like Medical Biology and traditional sciences like acupuncture, moxibustion and Chinese medicine.

Research in traditional medical sciences is organised under the Academy of Traditional Chinese Medicine. Its areas of research include medicine, surgery, acupuncture and pharmaceutics. The diseases studied successfully include asthma, bone fractures, high blood pressure, tuberculosis of bone, leprosy etc. (Stuttmeir, 1973). The unique feature of this Academy is the inclusion of western trained doctors in its research staff who have undergone training in traditional medicine. In 1966 there were around 200 such doctors out of a total research staff of 300 (Stuttmeir, 1973).

Another notable feature of medical research in China, is the combined use of traditional and modern diagnostic and therapeutic principles. In one instance 10 patients having a skull fracture with a large blood clot under the skull bone were selected on the basis of severity judged by modern diagnostic methods including x-rays. Then they were treated with intravenous mannitol and Chinese medicine. Conventionally, the blood clot would have had to be removed surgically. But this clinical trial showed that 9 patients recovered fully, the blood clot having been absorbed (Qiu Xiang et al, 1981).

Medical research also includes exploring the scientific basis of acupuncture. Based on extensive observation and research, it has been found that generally meridian system of traditional acupuncture corresponds with the neural pathways. But modern knowledge of anatomy and physiology of the nervous system cannot fully explain the theory of meridians. For example, on stimulating certain parts of limbs with heat, corresponding areas of the ears become sensitive to pain. Certain other unexplained physiological changes induced by acupuncture have also been demonstrated. For example, putting a needle through certain points in the body of a normal person causes increase in the number of white blood corpuscles and enhancement of the process of devouring of wastes and bacteria by these white corpuscles. Hormones too may be playing a part in this process in which different levels of the central nervous system have been found to be involved. (Chen, 1973).

What is most revealing about the philosophical aspect of medical research is that dialectical principles are often used in achieving solution of a research problem. For example from the principle "the law of unity of opposites is the fundamental law of the universe" in the words of a Chinese doctor ' we drew a number of conclusions : immobilisation and movement are equally important, fracture healing and functional recovery ought to be mutually complementary ... None of these aspects should be stressed to the neglect of the other. On this basis we formulated... new principles for the management of fractures" (Sheng, 1977).

Conclusion

Medical science developed in China under the influence of conflicting world-views, which represented the ideological requirements of the ruling classes or sections thereof. This struggle between contradictory philosophies was reflected in the sudden changes in direction which characterise the uneven course of development of medicine in China. Factors other than those intrinsic to science, played an important often determining role in shaping its course. The medicine that emerged after a conscious policy of integration was applied, reflected a change in the dominant worldview to one which is more organismic as opposed to mechanistic—a world-view implicit in bourgeois science.

Science and philosophy, two dialectical poles of a knowledge system, develop in an interpenetrating, mutually dependent fashion under the influence of the socioeconomic and cultural-ideological factors operative in a particular mode of production during a historical period. As Engels put it :

"Natural scientists... are still under the domination of philosophy. It is only a question of whether they want to be dominated by a bad fashionable philosophy or by a form of theoretical thought which rests on acquaintance with the history of thought and its achievements. Only when natural science becomes imbued with dialectics will all the philosophical rubbish.... be superfluous disappearing in positive science" (Engels, 1976).

Only a conscious appraisal of the history of medical science keeping in view the above perspective can provide a future vision of a new Intergrated Medicine.

In this way by emphasising equally empirical observation and dialectical concepts, on positive science and dialectical philosophy and by combining the traditional and modern medicine, Chinese medical science has contributed significantly to 'humanity's broad onward march.'

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POLICIES TOWARDS INDIGENOUS HEALERS IN INDEPENDENT INDIA

roger jeffery

Policies towards indigenous healers in independent India show considerable continuities with policies followed in the British period. varying according to the sex of the healer. Traditional birth attendants (dais) have been offered short periods of training by the State since 1902, whereas until recently male healers (vaids and hakims, and later homoeopaths) have been treated with official hostility. Current plans include the training of religious and ritual healers in psychiatric services as well as the employment of indigenous healers in new community health schemes. These changes are assessed in the context of a political economy of health services. This article is reproduced from 'Social Science and Medicine' 16:1835-1841, 1982.

Introduction

Many discussions of the potential role of indigenous healers in health systems ignore the historical dimension, apparently assuming that the proposals are novel and practicable. No-one should make this mistake in India, where there is the work of Leslie and Brass to draw attention to shifts in policy from 1820 onwards.[1] In this paper I want to elaborate on a small part of this topic by looking at official policy with respect to indigenous healers in the context of theories about the dynamics of relationships between indigenous and cosmopolitian medicine.

There are, in essence, three views of these relationships in India. The first is the naive scientistic: that the process is one in which the indigenous systems are steadily giving ground to the onward march of science, with only the areas where Western medicine is ineffective remaining for the indigenous practitioners. This was the dominant view of the British doctors in India; it remains common, though many Indian doctors express guarded sympathy and support for the relevance of indigenous medicine. The second view is the agnostic anthropological, best expressed in Leslie's phrase describing Asian medical systems as 'coexisting normative institutions', in which cultural processes of change are not simply unidirectional (with indigenous medicine being affected by cosmopolitan medicine but not vice versa) but multidirectional, with no predictions of necessary future patterns.[2] The third view is the political structuralist one, in which the superiority of Western medicine follows not from its scientific advances but because it is more closely linked to the class interests of the political leadership in the country.[3] I shall explore some of the strengths and weaknesses of these positions by taking a closer look at policies towards indigenous medicine in India, tracing the links between the British period and post-1947 policies, with particular focus on policy proposals made (and to a lesser extent implemented) since 1971.

Two caveats should be entered here. Firstly, there may be no clear relationship between official discussions of indigenous healers and the situation 'on the ground'. In particular the official mind tends to see the systems of indigenous medicine as discrete and discontinuous, whereas Leslie's model of healers occupying positions which shade into one another seems more plausible.[4] Secondly, there is a great deal of regional variation, not only pre-1947 when the Native States could follow policies radically different from those of British India, but also since Independence, when health policies have been constitutionally the sphere of the States.

The British Period

It is customary to see 1835 as a major turning point in British attitudes to Indian culture. This was the year of Macauley's *Minute* on educational policy, where he argued that European culture should provide the curriculum of schools and colleges. This strengthened the opposition to schemes which attempted a mixing of European and Indian cultures, or were designed to restore Indian culture to its presumed glory. In medical education it meant that the Calcutta 'Native Medical Institution' founded in 1822, would no longer teach aspects of *Ayurveda* (the Hindu medical scriptures, especially those of *Susruta* and *Caraka*) nor of *Unani* (the medical doctrines derived from Greek medicine and more closely linked to Muslim culture). While this move had obvious significance, it did not mean a total ban on such teaching, nor on co-operative relationships between the British Raj and indigenous practitioners as a class. As Hume has demonstrated, for example, in Punjab the Provincial Government employed

hakims (*Unani* practitioners) in the 1860s and 1870s, usually as vaccinators and health extension workers, and the University of the Punjab offered courses in *Ayurveda* and *Unani* medicine until 1907.[5]

One reason for the tolerance displayed by the State is that its own services, and practitioners trained in its medical schools and colleges, had a minimal impact before the end of the nineteenth century. The first four medical colleges (Bombay, Madras and Lahore following Calcutta by the 1850's) produced too few graduates to make much impact on the setting of practice for most indigenous healers, and were mostly employed in the growing State bureaucracy — in the army, the jails, the railways and so on.[6] The 1872 Census of Bengal, for example, enumerated only 3769 physicians, surgeons and doctors, but over 23,700 'Gobaidyas' and 'Kabirajes' (*vaids*, or *Ayurvedic* practitioners) and over 400 hakeems.[7] Prior to the establishment of the Indian Sanitary Commission in the 1860s there was no commitment by the State to provide health care services for its citizens, and there was a slow extension of that commitment beyond plague control and the provision of dispensaries. There was an awareness of the strength of the indigenous groups: plans to introduce medical registration in the 1880s were dropped because the Western doctors were too weak to defeat the expected hostility from the *vaids* and the *hakims*.[8]

A change to greater hostility can be dated from about the end of the century. By this time the cream of the Western doctors in India — the Indian Medical Service, (recruited in Britain though 5% Indian by 1913) was more conscious of its claims to a scientific legitimation: the number of Indian medical graduates and licence-holders was substantial, and they were offering a real challenge to the primacy of indigenous healers in the major towns; and there was the growth of a new middle class which provided new financial opportunities for both groups.[9] The early twentieth century saw considerable political conflict as the rising bourgeois nationalist movement embraced the cause of Indian cultural renaissance as well as the idea of science. The Indian National Congress included leading indigenous practitioners in its ranks as well as modernisers like Nehru. Even within the Imperial Government there were those willing to lend their prestige to new private medical schools, some of which combined indigenous and Western techniques in 'integrated' courses. The general argument used was that it was necessary to improve the training of indigenous practitioners because "for many years to come they will constitute the medical attendants of by far the largest portion of the Indian community".[10]

As Indians gained positions in Ministries after 1919 they were expected to implement policies based on this kind of view, but their scope was limited by severe financial restrictions and their impact was further reduced by pressures from the Indian Medical Services, whose members provided the senior medical civil servants. The new Legislative Councils supported the 'Indian' systems of medicine on both patriotic and economy grounds, but Ministers in several Provinces (e.g. Punjab and Bombay) resisted this and used their limited funds to attempt to bring 'modern scientific medicine and surgery within reasonable reach of all', spending only small sums on research into the indigenous systems and for improved training.[11] As a result, relatively few indigenous medical colleges were given State patronage; the schemes of medical registration excluded those who had not received Western medical training; and the Government of India restricted its activities to an investigation into the pharmacopeia of indigenous drugs.

With the rise of medical registration for the cosmopolitan doctors after 1912, the pressures on indigenous medicine increased. Doctors who offended the imported British ethical codes and collaborated with indigenous practitioners, either in their new colleges or in daily practice, were threatened with deregistration. The wedge between cosmopolitan and indigenous medicine was driven deeper by the disputes over the recognition by the General Medical Council in London of Indian medical degrees, which occupied much of Indian medical politics in the Inter-war period.[12] When the Indian Medical Association was established the early leaders, also prominent in nationalist politics, called for the admission of indigenous practitioners (if they were 'sincere'). By the mid-1930s, when these leaders were being incorporated into the new Indian Medical Council and other positions of influence, they had already drawn back from these positions because such policies might lead to a loss of their international recognition. Indigenous practitioners were first registered in Bombay in 1938, but they were on a separate register from that of the cosmopolitan doctors. They were accepted on the basis of experience or apprenticeship, and only after a 4 year delay was qualification to become the only means of registration. The Bombay Government was well ahead of other Governments, and even here an amendment in 1949 weakened their

legislation and admitted new practitioners on the basis of experience. Nevertheless, the Bombay Act was held up as the model for legislation after 1974.

The inter-war period thus showed gains and losses for indigenous practitioners. On the one hand, there was the establishment of colleges, rather than the less respectable *guru chela* form of apprenticeship which had previously been the sole training method. Several of these colleges were well-funded, especially in Delhi, Madras and the Princely States of Mysore and Hyderabad, for example. The indigenous practitioners also had the support of the reports of special Goverment committees set up to consider policy towards them.[14] On the other hand, their subordinate position relative to cosmopolitan medicine was reinforced by registration patterns, and previous stategies of raising status (e.g. by procuring a scientific facade through joint teaching and practice with cosmopolitan doctors) had received a severe blow. The weakness of the indigenous practitioners was partly a result of their own internal divisions. Not only were there the two main groups separated by linguistic, theoretical and religious differences, but there was also the newer group of homoeopaths, established particularly strongly in Calcutta and Bengal. In addition, each group had a variety of career patterns, usually locally specific, with little agreement about diagnosis or techniques. Often a noted local teacher would prepare his own commentary on the traditional texts, and a school which grew up around one teacher would deride and vilify that around another.[15] These divisions particularly affected elite practitioners, whereas the average healer might be very different—but evidence about them before the 1960s is slight and highly unreliable. Finally, there was the growing ideological split between those who wanted *integrated* teaching of cosmopolitan science and indigenous therapeutics, and those who considered the *pure* indigenous training sufficiently scientific. This divide dominates the post Independence debates.[16]

Different patterns affected female healers—whose history still has to be told. The presumption is that all indigenous healers were male and this is certainly implied by the medical texts and most offical comments. However, many female healers were recorded in the early Censuses, (see Table 1) and some modern fieldwork reports refer to female healers.[17] To be sure, few of these would have had access to the "high culture" learning of the elite male practitioners, but that was true of many of the male practitioners too. The main reason why female healers were invisible to male enquiries was probably that their clientele was almost entirely female. The only group who do appear in the historical discussions are the traditional birth attendants (*dais*), who are recorded separately in the nineteenth century Censuses, and in several early discussions of caste, midwifery is described as the hereditary occupation of the women of particular untouchable castes.[18]

Apart from sporadic training by missionaries in the middle of the nineteenth century, the first serious attempts to train indigenous midwives came in 1902 when money raised in Queen Victoria's memory was put into a fund for this purpose.[13] A sum of Rs 40,000 was available each year, and training followed a scheme first developed in Amritsar in which the *dai* was paid a fee for attending the classes and was expected to attend regularly, to report cases, and to call in the teacher when she had difficult deliveries. Simple examinations were held, and the successful completion of a course

Table 1 Practitioners in selected provinces. 1901 Census

		Bengal	Bombay	Madras	N.W F.P. Punjab	UP
With a diploma, licence or certificate	M	4123	1172	507	946	711
	F	170	43	19	78	50
Without any diploma etc.	M	33899	3648	17441	7198	6750
	F	1258	243	1501	665	789
Midwives	M	144	—	—	—	312
	F	21036	1891	4753	6422	11341
Compounders, nurses etc.	M	2016	2127	2599	2602	1854
	F	945	705	328	315	324
Total medical	M	41912	6770	21267	11225	9941
	F	23480	2882	6609	7511	12517

Notes : These are recorded as 'actual workers' : dentists, occulists and administrative personnel (including members of the IMS) are included in the total but not in the other categories shown : vaccinators are included with compounders etc. : and the figures include some feudatory States.

could lead to a diploma and to registration. There are no complete figures for the numbers being trained in any year, but it is clear that a limit was set by the shortage of female doctors or of public health nurses (lady health visitors) to carry out the training. These schemes were based on the following assumptions; that institutional deliveries were very unpopular amongst Indian women (they remain so today); that midwifery was a hereditery occupation amongst certain low castes (the situation is almost certainly more complex than this); and that the *dai* was expected to deal with the menial, polluting, aspects of the delivery. Several features made it acceptable for the State to become involved in *dai* training, in particular, there was no band of Western personnel whose interests were threatened by such training. The *dais* themselves were so poor and of such low status that they could be persuaded into training schemes with relatively little difficulty; and few people thought that the *dai* had any skills worthy of being retained. In all these ways the male healers were different, and this largely accounts for the different policies pursued with respect to them.

Policy After 1947

One of the most obvious ways in which the Congress Governments after 1947 followed the precedents established by the British Raj is in the sphere of health policies. The new Government of India had two sets of proposals to deal with the health problems of the new India : those provided by the National Planning Committee, established by Congress itself in 1938; and those of the Bhore Committee, established in 1943 by the British to plan for reconstruction after the War was over. There was considerable agreement— for example in the proposal that the health service should be free at the point of contact for patients— but where they differed, the post-war Governments followed Bhore rather than the NPC. This was particularly true with respect to the training of part time village level health workers — a corner-stone of the NPC proposals but toally ignored by Bhore. On relationships with the indigenous healers both reports were ambivalent, but Bhore was more hostile. The NPC resolved that

> An attempt should be made to absorb the practitioners of the Ayurveda and Unani systems of medicine into the State health organisation by giving them further scientific training where necessary. Medical training in every field should be based on scientific method.[20]

By contrast the Bhore Report pointed out that the indigenous systems had nothing to say about public health, preventive medicine, obstetrics or advanced surgery, and described the systems as archaic and out-side the onward march of world science. Bhore's policies involved

> a country-wide extension of a system of medicine which, in our view, must be regarded as neither Eastern nor Western but as a corpus of scientific knowledge and practice belonging to the whole world and to which every country has made its contribution. [21]

Proponents of the indigenous systems were able to exploit the ambiguities of these proposals by claiming that science was not the preserve of the cosmopolitan doctors since *Ayurveda* was already scientific; and that only racial bias and a lack of objectivity prevented cosmopolitan medicine from learning from the Indian systems. [22]

The debate over these issues became heated over the first 10 years of Independent India. The 1946 Health Ministers' conference endorsed the Bhore proposals, and ignored the NPC proposals, with the sole exception of its resolution on indigenous practitioners. This was elaborated to include expenditures on

(a) research into the indigenous systems;

(b) the establishment of new colleges and schools;

(c) the establishment of post-graduate course in Indian medicine for graduates in Western medicine;

(d) the absorption of *vaids* and *hakims* after scientific training where necessary, as doctors, health workers etc.;

(e) the inclusion of departments and practitioners of Indian medicine on official boards and councils. [23]

In the face of this strong political pressure, the Government of India followed British precedents and established a committee, under a cosmopolitan doctor (Chopra); most State Governments were similarly slow to act.

By 1947, then it is possible to discern three main organised groups contesting the medical domain in India, the cosmopolitian doctors with a stranglehold on the medical bureaucracy, the 'pure' indigenous practitioners; and the 'integrated' practitioners. A fourth, less organised group campaigned, at least in the 1970s, for the freedom

of unqualified and unregistered practitioners to practice as cosmopolitan doctors. (This group probably best represented the interests of the majority of practitioners in India at the time.) The three main groups have all failed to achieve their own preferred solutions, and most of the issues have recurred again and again in the main policy-making arenas. There are four main topics on which battles have been fought: (1) whether to incorporate indigenous practitioners in the State medical service, or whether to train a separate cadre of community health workers; (2) how to register existing practitioners and those graduating from the indigenous colleges, and how to prevent unregistered practice; (3) whether indigenous colleges should include Western scientific training and an introduction to cosmopolitan therapeutics; (4) whether access to 'allopathic' medicines should be restricted to those registered on the 'Western' medical registers. There were subsidiary issues— for example whether State funds should be used to support training in the indigenous systems or indigenous hospitals— which were agreed in the early period: in fact something under 5% of the Plan health expenditures have been allocated to the indigenous systems of medicine, though these allocations have been consistently underspent.[24] I shall deal with the four more important issues in turn.

1. The Incorporation of Indigenous Practitioners: The cosmopolitan doctors were opposed to any such involvement. In the immediate post-Independence debates they had the support of Nehru and his Health Minister (Rajkumari Amrit Kaur) in arguing with Bhore that all practitioners should have the basic MBBS qualification; if they then chose to practice other forms of medicine that would be up to them—as is the case in the UK. In general it was argued that it was impossible to *integrate* the various systems without causing chaos. However, this was the solution which Chopra proposed: his report recommended that all students should be taught the elements of all systems (like the Chinese solution, at least during the 1970s).[25] Once again the international standing of Indian doctors was used as a powerful argument for rejecting such a move; and the variety of skills and backgrounds of the indigenous practitioners was seen as a reason why no more than perhaps 2% of them could be used in the national health services. While the Government of India thus expressed its hostility, the States were free to act on their own, since health was constitutionally their affair, subject to certain ill-defined constraints with respect to standards of medical education, and health Ministers made their autonomy clear in 1954.[26]

In addition, it was clear that the training of auxiliary medical personnel was regarded as a perferable alternative means of extending rural medical care. A scheme proposed in 1952 was discussed in the 1954 Central Council of Health and in general, those supporting the health auxiliaries were those opposed to the involvement of the indigenous practitioners.[27] However, this proposal was refined and reduced over the next few years, until it was dropped completely.

The early 1970s saw a resurgence of discussions concerning the inclusion of indigenous practitioners. This followed the *'Gharibi Hatao'* election success of Indira Gandhi in 1971. In 1972 the Minister of Health announced a scheme to enlist registered medical practitioners in *Ayurveda, Unani, Siddha* and homoeopathy after a short period of training (4 months), to provide them with a kit containing medicines for common ailments, and thus "to provide medical services to the entire rural area within as short a time as possible, say about three to four years".[28] Apparently this scheme received the strong backing of the Prime Minister, and sanction by the Task Force of the Planning Commission, but when the Health Minister was replaced after nine months, little more was heard about it. However, in retrospect, it can be seen as forerunner of schemes proposed in 1975 by the Srivastav Committee, and in the plans currently being implemented, which are loosely based on the Janata Government proposals made in 1977. The Janata manifesto called for the organisation of "a cadre of medical, paramedical community health workers (CHW) among whom the trained practitioners of indigenous systems of medicine will be a part".[29] In practice, it was decided that the community should choose who was to be the new CHW and they were merely to be advised that the use of an existing indigenous practitioner would be wise. In fact the choice of the CHW has been a highly political decision, heavily influenced by the doctors who were to do the training, and it seems that relatively few CHWs are, in fact indigenous practitioners, whether trained, registered or not. Once again, the offer being made to the indigenous practitioner (fulltime or part-time) was not very attractive, since he would be recruited at the bottom of the medical hierarchy. However, the training schemes included the possibility that the CHW be trained or equipped in indigenous techniques

and therapeutics, and some States recruited indigenous graduates to do the training.

There was no suggestion that the CHW should be a trained *dai*, which is not surprising, given the low estimation of these women. Nor were women with other backgrounds chosen in spite of the experiences of various voluntary schemes which suggested that women were more reliable, acceptable and suitable for this work. Instead, a new *dai* training scheme was introduced, which was essentially just a return to the earlier schemes which had been allowed to lapse in the 1950s. Like the CHWs, they were to be trained at the rate of 1 per 1000 population, and there may have been a feeling that this was the women's proper place. Unlike the CHWs, however, the trained *dais* were not to be given a regular honorarium but only compensated if they referred women to antenatal registration. So far no evalutation of the *dai* training has appeared, though one is planned for 1981.

The impact of the latest schemes is thus twofold. On the one hand, it has meant the inclusion of more indigenous practitioners into State employment: on the other hand, it has created a new band of practitioners who see themselves as potential doctors. Voluntary schemes have also been unwilling to involve the local indigenous healers except in a peripheral way. Once again, the stated reasons have been that the indigenous healers are not relevant in the services which are regarded as high priorities — maternal and child health, or community health services, and there is undoubtedly some strength in this argument.

2. What to do about registering or banning unqualified practitioners: The years following Independence also saw debates about the proper course of action to follow with respect to unqualified practitioners, with moves to outlaw their practice being seriously considered in 1955 and 1959. The discussions in 1955 were inconclusive: another committee was established (the Dave committee) and its report in 1958 (recommending the continuance of integrated courses and the establishment of country-wide registration schemes) was left for States to decide whether to implement. [30]

The 1956 Act which re-established the Indian Medical Council (now called the Medical Council of India) prohibited unregistered medical practice, but the Government of India advised State Governments not to implement that clause. In 1972, after a whole series of discussions in the Central Council of Health, States were advised to follow Kerala's proposal to amend their legislation so that those practising 'modern medicine' for at least 10 years would be registered on a separate list and allowed to continue (but be barred from prescribing dangerous drugs, doing surgery, obsterics or radiotherapy). No further unqualified practitioners would then be allowed to practise. The Indian Medical Association called this a "quacks' charter", and managed to prevent any move on this front — but they could not prevent unqualified and unregistered practitioners from continuing to provide 'modern' medical services.[31]

The 1950s and 1960s saw the slow but steady extension of registration schemes designed to register those currently practising indigenous medicine, but to forbid any new practitioners who had not gained registrable qualifications. As with the model for this legislation, the 1938 Bombay Act, there was considerable pressure against the enforcement of the penal clauses and moves to pass later amendments to include a new set of unqualified practitioners.[32] Even after the 1970 Central Government Act establishing a central policy on standardising the registration of indigenous practitioners, some States were still registering on the basis of experience only, while others insisted on the acquisition of a registrable qualification.[33] By 1977 there were 93 colleges providing *Ayurvedic* education, with a total intake capacity of over 3600 per year; 14 *Unani* colleges with an intake capacity of 485 per year; and one *Siddha* college with 50 places a year [34] However, the total registered as practitioners on the basis of institutional qualifications was much greater than this suggests. It would appear that registration boards take a relatively lenient view of claims to qualifications, or that there is massive double registration (see Table 2).

Table 2.

Registered practitioners in Indian systems of medicine and homoeopathy. 1977

	Institutionally qualifed	Not institutionally qualified	Enlisted
Ayurveda	117765	105344	—
Unani	10262	20138	—
Siddha	1559	16569	—
Homoeopathy	19.871	74166	51397
Total	149457	216217	51397

Source : *Pocket Book of Health Statistics of India 1978.* Central Bureau of Health intelligence. New Delhi. 1979.

3. Whether indigenous training should be 'pure' or 'integrated' : Immediately after Independence the supporters of 'integrated' medicine were successful in several parts of the country in establishing colleges and ensuring that the qualifications of their graduates were registrable. However, the counter-attack came fairly quickly. At the 1954 meeting of the Central Council of Health, representatives of most of the North Indian States (including Bihar and UP, the largest) supported the move by the Bombay Government to introduce 'pure' training in Indian medicine. Again the supporters pointed to the 'popularity' of the indigenous practitioners; the tendency in the integrated courses to spend too much time on Western medicine; the incompatibility of the indigenous and the cosmopolitan systems; and the availability of indigenous graduates for rural practice. The opposition argued that science was universal; that it was a crime allow the 'unscientific' to practise in rural areas simply because they were cheap: that there was an absence of senior *vaids* or *hakims* to take teaching positions; and that indigenous practitioners actually used Western drugs and treatments. [35]

These disputes have largely been won by the supporters of the 'pure' school, and by 1975 there was increasing concern expressed by and about the estimated 50,000 integrated practitioners, whose anomalous position with respect to registration and to drugs legislation left them particularly exposed.[36] However, to a considerable extent this was a Pyrrhic victory; most graduates appear to perceive their training as second-rate and it is widely argued that they actually practise using cosmopolitan drugs. In other words, the attempt to reach parity of status has not yet been successful.

4. How to control the use of 'allopathic' drugs : Finally, in spite of an agreement in 1958 that only those with Western medical qualifications would be permitted to prescribe the drugs listed in the 1945 Drugs Rules, this too was not implemented. This was complemented by an apparent unwillingness to make serious attempts to enforce general controls on pharmacists and pharmaceutical companies, so that there is little or no effective control over access to any drugs in India. This alone tends to nullify almost all the other decisions with respect to indigenous healers. As Neumann and others have shown most 'unofficial' healers, whether registered as *vaids* or not, tend to prescribe largely from the cosmopolitan pharmacopeia.[37] With relatively free access to these drugs, there are continually new practitioners becoming established on the basis of experience. Indian political culture seems to accept as legitimate the claim that they have rights to a livelihood in this way. One of their strongest arugments is that they provide services where cosmopolitan doctors are unwilling to go — in the rural areas. Nevertheless, many of them actually practise in urban areas, but through their links with politicians they seem to be able to prevent punitive action against themselves and to be able to make powerful political cases for the amendment of hostile legislation.[38]

Conclusion

One of the difficulties of making clear assessments of the nature and effect of Government policy with respect to indigenous healers is that there is no clear line being followed. On the one hand, it is clear that indigenous medicine is essentially marginalised, with many of its practitioners part-time, dealing with a limited range of ailments, drawing heavily on the cosmopolitan pharmacopeia and perceiving cosmopolitan medicine as superior. Government policy, particularly in terms of employment and expenditure, reinforces this trend. On the other hand, there is a trend towards greater respectability, with the extension of registration schemes, the recognition of indigenous contributions by the international agencies and in CHW training, and some steady expansion of employment. The failure of attempts to suppress or control unqualified practitioners, and the loop-holes in registration schemes, mean that the cosmopolitan and qualified indigenous practitioners alike are theatened by 'unfair' competition which is outside their control, so that the formal commitment to the modernisation of medical care in India is very different from the reality.

There seem to be a few threads which can be drawn out of this, however. Firstly it is clear that indigenous practitioners of all kinds do provide an alternative which the Government has to come to terms with whenever its legitimacy is weakened. The greatest advances have come in the period when the new Republic was being established; when Congress was reasserting its supremacy after its losses in the late 1960s; and during the Janata regimes since 1977. Secondly, it is clear that the alternative solution to the problem of providing a cheap extension of Government health services to rural areas — the employment of para-medical personnel or community health workers — has been preferred. This has been premissed on the idea that they will be more controllable, and less likely to claim the status of 'doctor'—when of course

this is the major complaint of the cosmopolitan doctors and the major aim of many CHWs.

In terms of the arguments with which I opened this paper it is clear that all of them have their weaknesses. Indigenous practitioners are not dying out, they are infiltrating Government and retaining considerable popular appeal, even in urban areas. On the other hand, their impact on cosmopolitan medicine is a great deal less than the influences the other way, and the indigenous systems remain subordinate. Yet to argue that cosmopolitan medicine alone meets the needs of the ruling class is also inadequate, since the very political support which the practitioners can generate by virtue of their positions means that politicians woo them assiduously, even if they no longer have a coherent ideological position which commands much support. It is much easier to see how women healers are being marginalised and excluded from positions of influence than to draw clear pictures of the nature of the changes amonst the men.

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SYSTEMS OF MEDICINE: ROLE AND RELEVANCE

sujit k das and smarajit jana

While traditional medical systems passed their peak centuries ago, modern medicine has not entirely replaced them. The issue of traditional v|s modern medicine, the authors argue, is essentially an ideological one, governed by political interests; this is illustrated by the variance in the official, semi-official, and progressive views on the subject. Even the Chinese experience, the authors say, demonstrates this. Systems of medicine, as such, in their opinion, are irrelevant in the context of a people-oriented and egalitarian health system, in which they will comprise merely a set of therapeutics. Thus the entire debate on the role of traditional medicine is academic.

The historical development of health care in the western societies has been analysed and explained in various ways. Those analyses bear relevance to the Indian situation to the extent that western medicine (allopathy) had been introduced and developed by the colonial power and after independence, it developed rapidly with State patronage. Traditional systems, however, passed their peak of development long ago, but existed and persisted in Indian society.

Among the traditional systems, the oldest one, Ayurveda, reached a very high level of development. Ayurveda is the fore-runner of Indian scientific development and the father of materialist philosophy. Ayurveda is a comprehensive body of knowledge in medical science having well developed or rather too highly developed theoretical foundation based on empirical data, scientific methodology of observation, experimentation and analysis, and disciplined norms of practice. Ayurveda asserts that all things living and non-living are products of natural matters; disease is the result of material change in the body due to interaction with natural matters; and therefore could be corrected to an extent with the help of natural matters (drugs). Charaka-Samhita declares, "There is nothing in nature without relevance to medicine". There is nothing supernatural about natural and human events. In ancient society, the dominant ideology of the all-powerful ruling class was totally and oppressively anti-materialist. Materialist heretics actually had no right to live. That is why, all extant source books of Ayurveda are found to be camouflaged with enormous amount of metaphysical and religious garbage with a view to project an appearance of conforming to the dominant ideology. (Chattopadhyay, 1977). But what now exists and is practised as ayurveda or sidhha is not the ancient dynamic science of ayurveda but a decadent form which absorbed the alien metaphysical interpolations as truth and degenerated. The other major existing system Unani, the legacy of Greco-Arab medicine, is no different.

The scientific basis of modern medicine developed later. Starting from the 19th century, it developed on the shoulders of physical and biological sciences in the 20th century — achieving a tremendous speed after the 2nd World War. It has been argued that British colonialism brought along with it destruction and decay of the indigenous systems of medicine (Banerji). But there is little data available to substantiate this view. Others claim that modern medicine did not make much impact except with limited urban population; the largest section of the population still depend on indigenous systems, which is dealing more or less satisfactorily with many of the health problems of the local people. (Bannerman et al, 1983)

Alhough the state health care service has been built on the principles of modern medicine the indigenous systems including homoeopathy have been receiving state patronage in the later period. Budgetary allocation on the development of indigenous systems and homoeopathy has been increasing since the fourth plan period and the number of their practitioners as well as infrastructure have now reached impressive proportions.

	Total No. of Regd. practitioners	Admission capacity	Hospital Beds	Dispensaries
Ayurveda	2,32,247	3,306	9,783	12,027
Unani	22,756	535	627	986
Sidhha	18.190	75	—	426
Homeopathy	1,09,493	7,513	2,249	1,782
Modern Med.	2,68,712	10,934	4,86,805	17,455

Source : Health Statistics of India; CBHI., Ministry of Health & Family Welfare, GOI, 1983. Figures are incomplete due to lack of information from a few centres.

To this figure if we add the number of various paramedical personnel e.g. Pharmacists, Nurses of different categories, MPHW, LHV, Health Assistants and Supervisors, CHG, midwives, one may arrive at the conclusion that India does not need any more doctors at all for a comprehensive health care delivery system (ICSSR-ICMR, 1981). Still the official view, which is inherently wary to admit failure, is that the state health services have been unable to meet the actual health needs and priorities of the people, have been hospital-based and cure-oriented neglecting the preventive, promotive, public health and rehabilitative aspects of health care, and benefiting only the upper crusts of the urban population (GOI, 1982).

The Question of Different Systems

The official view :

The rising aspiration of the masses and increasing demands of medicare from the disease-ridden people, particularly incensed by the glaring difference in the standard of medicare between the haves and have nots, have so far been chiefly instrumental for increasing allocation in the state health sector. People have also become aware of the discriminatory availability of the state service. The government, therefore, has to admit the existing reality which is self-condemnatory and with the view to find a way out, advocated promotion of indigenous and homoeopathic systems of medicine. To provide ideological cover, a large number of virtues of those systems have been discovered and invoked, e.g. rich heritage, glorious achievements and cultural compatibility (GOI, 1982). The government realises that if the grievance of the larger section is contained by providing them with low-cost non-allopathic systems, the absolutely necessary but costly provision of modern medicine for the affluent urban section can be safeguarded. But, the life-saving contributions of modern medicine cannot be entirely withdrawn from the people. Hence, the question of integration. It has been recommended that the practitioners of the non-allopathic medicine must have a 'basic knowledge of human anatomy, physiology and other necessary medical knowledge'; research should be carried out with modern equipment and diagnostic methodology, so that it becomes acceptable to the modern scientific world; modern technology be introduced for the manufacture of traditional medicine and specific standards be adopted to ensure quality of raw materials and manufactured products. For integration of the indigenous and modern systems, the services of non-allopathic practitioners should be integrated, at the appropriate levels, within specified areas of responsibility and functioning, in the overall health care delivery system (GOI, 1981 and 1982).

The leaders miss the point that if the above measures are implemented, nothing remains of tradition and the very indigenous character is wiped out. They also forget that the non-allopathic systems have little to contribute towards preventive, promotive, public health and rehabilitative aspects of health care. But then, their concern is not so much for traditional systems as for availability of some acceptable form of medicare for the uncovered population.

The semi-official view :

The study group of ICSSR—ICMR recommends that there should be a national system of medicine with 'synthesis', and not 'integration' of different systems; practitioners of indigenous systems be utilised in the national system; each system be allowed to retain its own identity and grow according to its own genius; in medicare institutions patients be offered choice of systems; in course of time all training institutions of medical and health personnel will teach one and same system of medicare with individual systems being offered as specialisation courses at the post-graduate level; and in the same breath, 'in course of time medical graduates from any medical college would be able to provide such multi-system care' (ICSSR—ICMR, 1981). Earlier an official committee also recommended a national system of medicine and health services, in keeping with our life systems, needs and aspirations. (GOI, 1975).

It is clear that these recommendations are s full of self-contradictions and wishful thinking that these cannot be taken as anything but hasty remarks. But one point is obvious. The observers are anxious that somehow the non-allopathic systems be supported and given a place, whatever that may be, in health care service.

The WHO, has since come out as another champion of traditional systems. Facing the reality of shortage of personnel and provisions of MM, and the existence of a large number of practitioners of other systems, the WHO calls for integration at appropriate levels but also suggests selective scientific training for personnel and scientific biomedical research into their therapeutic materials.

The above views, while talking about cultural compatibility, commercialisation and high cost of modern medicine have introduced another ideological

pointthat health is essentially an individual responsibility (GOI, 1975), and that community participation is the process by which individuals and families assume responsibility for their own health and welfare and for those of the community (WHO-UNICEF, 1978).

The non-official progressive view :

Essentially the progressive views on the question of non-allopathic systems evolve from their critiques of modern medicine. There is no such thing as medicine in general; medicine is always articulated in a given social formation and the mode of production of that social formation gives rise to its corresponding medicine; thus we can only speak of feudal medicine, capitalist medicine, or communist medicine; thus, modern medicine, is capitalist medicine. It has a dual function : (a) dominance and control, exercised to maintain the exploitative relations of production, and (b) useful and needed function, which is necessary in any society, to contribute to the care and cure of the working population. These two functions are not separate but, rather, the control function is exerted through the useful function (Navarro, 1983) Modern medicine is mechanistic and reductionist giving rise to professionalism and mystification, establishing the domination of a class of elite health professionals who propagate, reinforce and maintain bourgeois ideology (Waitzkin, 1984). Perhaps the most profound, impact-making critique is that of Ivan Illich. His analysis of clinical, social and structural iatrogenesis, leading to growing medicalisation of life exposes the negative effects of modern medicine in a telling manner. (Illich, 1977). Modern medicine, based on the paradigm of clinical medicine, even at its most progressive limits persists as an individualistic, class-biased and ideological mode of diagnosing, treating and preventing illness, and is necessarily inadequate as it ignores the socio-political and economic determinants (Turshen, 1977).

To obviate the negative effects of modern medicine, a number of prescriptions have been offered, the promotion of traditional systems of medicine being one of them. The Chopra Commitee (1948) recommended the use of indigenous systems at the lower level and synthesised medicine at the higher levels of medicare, and it has been lamented that had these recommendations been implemented at that time, it would have resulted in a drastically different system of medicine. (Jesani & Prakash, 1984). Though the present official view, is veering round to these recommedations, there appears to be little prospect of the development of a drastically different system of medicine. While emphasising the alien identity of modern medicine and cultural compatibility of indigenous medic ne, and recommending maximum use of self-care procedures and various home remedial measures, services of traditional healers of various systems, and community-selected primary health workers, Banerji conceds a central scientific core in modern medicine and seeks its separation for correct application in Indian care system (Banerji 1982). Others, while deprecating unnecessary polemics between different systems, call for 'a coherent synthesis of the valid elements of the different systems of medicine into a modern scientific health science', and argue that simplified scientific analysis of drugs and remedies of different systems and their propagation among the people will result in self-reliance of both the people and drug availability. "Ayurveda can continue to provide valuable ideas for reserach in basic and applied biomedical research. But this would be possible when Ayurveda undergoes a basic transformation. Ayurveda has to become Ayur-Vigyan (Science)" (Vaidya). Another intensely vigorous view is the Report of the Committee on the Indigenoue Systems of Medicine. Even after a long period of neglect due to absence of State patronage and well over a century after the introduction of western medicine which became the sole recipient of state help, the indigenous systems of medicine were not only serving the need of over 90% of our people, but doing so much more effectively and economically than western medicine" (Government of Madras, 1923). This view denounces the attempt of synthesis by placing the indigenous remedies under scrutiny of modern science and, asserting that the present location of different systems is due to the political process, urges clear identification of a system of medicine that can meet the needs of our people (PPST, 1984). In respect of tribal societies, it is claimed that tribal medicine which is actually based on ancient ayurveda, is competent enough to meet the local needs and for the protection of cultural identity and with the objective of self-reliance, entry of modern medicine should be barred (Shankar, 1985).

The Chinese connexion

All these views almost uniformly draw inspiration from the Chinese model which is hence, discussed separately. The Chinese policy, a few years after revolution, of integrating the traditional medicine and practitioners into the mainstream of medical education and health care service, received worldwide publicity and almost universal

appreciation. It has since been hailed as a success. Attempts have, therefore, been made to introduce this policy in several Third World countries with disastrous failures which have later been explained as due to difference in socio-political-economic structure. But the actual Chinese model has seldom been painted clearly and truthfully.

The basic aim of the Chinese health care service in the fifties was to maintain, develop and raise *production* both in rural and urban context i e. agriculture and industry. It has been repeatedly stressed in the health policy of the government and the party that the principal aim of health work is to ensure industrial and agricultural production. This fact may embarass the strident critics of capitalist medicine and health care which is accused of pursuing the very same aim. Agriculture being the mainstay of the economy, organised rural health care is practically non-existent, health personnel and infrastructure being miserably inadequate, the earlier Mao Tse Tung thought has been invoked, ".... to rely on modern doctors is no solution. Of course modern doctors have advantages over the doctors of the old type, but if they do not concern themselves with the sufferings of the people, do not train doctors for the people, do not unite with the thousand and more doctors and veterinarians of the old type in the Border Region and do not help them to make progress, then they will actually be helping the witch doctors and showing indifference to the high human and animal mortality rates". Mao's reference to withchraft is very real. Joshua Horn's own experience told us that the services of the traditional practitioners was available only to the rural elite, because they were highly professionalized and expensive and the herbal medicines were also very costly. The overwhelming majority of the poor villagers had actually to depend on the village quacks and witch doctors in pre-revolutionary China (Horn, 1971)

Integration of Chinese medicine with modern medicine is only a part of a whole comprehensive health care service. This policy is based on the principles of modern medical science and operated through indigenously available technology, and infrastructure. 'Mass line' in preventive work and environmental protection, emphasis to maintain production, integration of traditional doctors for man-power mobilisation in medicare, comprehensive coverage of population, rapid production of health personnel, and political dominance in health administration — are the basic elements. Regarding integration, the policy adopted at the First National Health Conference (1950) was based on the attitude that in view of the shortage of doctors and medicine, Chinese traditional medicine should be utilized (because it was there and readily available rather than because of any inherent value it had). In the policy of 'unity and reform' the stress was on reform of the traditional system by the western. When this attitude failed to bring the desired results, the political command intervened and the campaign for superiority of Chinese culture and glorious tradition of Chinese medicine was launched which enhanced the social status of the traditional practitioner and resulted in more widespread use of herbal remedies. "Even when herbal remedies were not very effective, they were of considerable importance as they still provided the peasant with some support, whereas if it had been decided that only modern drugs should be used, he would have none at all as expenses would have placed any drug therapy out of reach. The use of herbs for the purpose of psychological support — though not explicitly admitted in the Chinese press — is not much different from the wide variety of placebos offered to patients daily in industrialised countries". (Wilenski 1979).

From the beginning of the sixties, the enthusiasm towards traditional systems ebbed, and professionalism and elitism again started gaining dominance; even the traditional practitioners were concentrated in the larger country towns and served on the basis of private practice Mao's intervention at this stage on the eve of the cultural revolution reversed this direction. In his famous June 1965 directive Mao said, "Tell the Ministry of Public Health that it only works for 15 per cent of the entire population. ... The Public Health Ministry is not a people's Ministry. It should be called the Urban Public Health Ministry or the Public Health Ministry of the privileged or even the Urban Public Health Ministry of the privileged Medical education must be reformed. .... A vast amount of manpower and materials have been diverted from mass work and are being expended in carrying out research on the high level, complex and difficult diseases, the so-called pinnacles of medicine. As for the frequently occuring illnesses, the widespread sicknesses, the commonly existing diseases, we pay no heed or very slight heed to their prevention or to finding improved methods of treatment. It is not that we should ignore the pinnacles. It is only that we should devote less men and materials in that direction and devote a greater amount of men and materials to solving the urgent problems of the masses. .... We should keep in the cities those doctors who have been out of

school for a year or two and those who are lacking in ability The remainder should be sent to the countryside". (Mao, 1977)

The large numbers of the health professionals since sent to work in the rural areas soon realised that they could not handle the vast burden of rural ill health and also they could not hope to return to urban institutions without an alternative rural health service. Soon emerged the barefoot doctor who is neither a paramedic nor a doctor's auxilliary, but a part-time doctor trained in diagnosing and treating, without assistance, common or recurrent diseases prevailing in the locality. The scheme succeeded for the chief reason that medicare infrastructure had since been organised on the basis of universal coverage right up to super-speciality at the top most level with efficiently functioning referral system. But the recent trend is a shift towards greater professionalisation and medicalisation of the health system, higher education of the barefoot doctors, greater emphasis on higher quality of medical education with the return to seven-year curriculum, and more research centres, modern hospitals, specialists and technologically sophisticated interventions (Rhode, 1983). China now takes pride in letting us know that she, in 1982, has 9,52,000 doctors of modern medicine compared to 2,90,000 of traditional medicine and 2000 senior doctors of modern medicine also trained in traditional medicine While in the year of liberation, there were 10,000 fully trained and 30,000 partially trained doctors of modern medicine and 5,00,000 traditional practitioners. (Wilenski, 1979).

The culture issue :

Concern for Indian culture is the common issue in the agenda of the advocates of the traditional or integrated systems. "Perhaps the simplest and most useful formulation of the concept of culture is to say that it is acquired or learned system of shared and transmittable ways of adjusting to life situations. .... A common characteristic recognized in all treatises on culture is *change*, a capacity to shift, accumulate or loose components, which makes culture far more flexible and variable than are the somatically determined patterns of behaviour" (Simmons & Wolff, 1954). Culture is not a rigid frame, inert model, or static dogma of guidelines governing community or individual conduct. Culture is built up on complex interactions — involving physical, environmental, ideological, political, and predominantly economic. Economic relations i.e. relations of production, exchange and consumption, find expression in cultural and social responses, and changes in the economic relations bring about profound changes in the cultural matrix. Tradition is not culture. Tradition is the vestiges of earlier cultural trends, and ideologically influences the present and future trends. Just because the peasant lives with the bullock cart for generations, he should not be taken as culturally bound to the bullock cart, or demands to remain so Adherence to witchcraft and ideological allegiance to the metaphysical theory of health and disease do have their roots in economic relations and is a reflection of the stage of development of the productive forces and superstructure. While on the one hand, the capitalist onslaught on the tribal ways of life does produce disastrous consequences, on the other, the urge to protect the tribal identity gives rise to irrational obscurantism which is anachronistic to progress and inadequate to meet the need. Such an urge often leads to the proposition that western medicine is not essential for India's particular needs and we are entitled to a separate scientific medicine relevant to our social-cultural-historical context (Bajaj, 1985).

A carefully planned study of health behaviour of rural population of India has revealed "that the response to the major medical care problems was very much in favour of western (allopathic) system of medicine, irrespective of social, economic, occupational and regional considerations. Accessibility of such services (modern medicine) and capacity of the patients to meet the expenses were the two major constraining factors" (Banerji, 1974). In contrast, the observations of studies conducted in 1951-52 in villages of Rajasthan and UP reveal that the villagers largely rejected the western medicine in favour of witchcraft and traditional remedies (Carstairs and Marriot 1955). This profound change has occurred not only due to the remarkable curing and life-saving remedies of modern medicine but also from economic changes in all spheres of rural community life and consequent politico-ideological changes. A study by 13 social scientists in the Toushan commune health clinic of Kuangtung province, China, concludes that incorporation of indigenous medicine into the organised health care service is a rational move on political, ideological, technical, socio-medical and economic grounds but conceds that 70 percent of patients opt for western medicine. Medicine bag of the barefoot doctor carries 80 percent drugs of modern medicine (Lee, 1982). In Shangdon province, China, the number of x ray examinations increased by 80% in the rural areas in 4 years ('76-80'). Of the total 4111 x-ray machines in the province, 3824 are situated in rural and district hospitals (Feugetal 1984). The

assertion of cultural compatibility of traditional medicine in India appears to be a myth. The Government of West Bengal has for some years appointed homoeopathic and ayurvedic practitioners in the rural health centres. In all such Centres they not only remain idle but usually their services are utilised for other purposes. No quantitative study is available on the practice of use of modern drugs and implements by the non-allopathic practitioners. Journal of the IMA (June, 1985) published a letter from one Dr Buch who complained that the existing govt rules precluded him from recruiting 15 Ayurvedic graduates, who he interviewed, for a TB hospital at Keshod, Gujarat, which had been suffering from extreme dearth of doctors, even though all those Ayurvedic doctors were practising MM in the nearby villages. He lamented, "Why we continue to waste our national resources on such education which our youth decline to practise in future?"

The other issues :

Mystification : is more pronounced in the traditional systems which draw sustenance from metaphysical philosophy and fatalistic belief regarding health and disease, isolated from environmental and socio-economic-political determinants. In contrast, the body of knowledge of modern medicine is not only universally accessible but, shorn of its avoidable terminology, this knowledge can be and has been mastered by non-medical personnel. Because of its integral relationship with other physical and biological scientific disciplines, modern medicine has largely been demystified at the higher functional level. The mystification of the practice of modern medicine is not an isolated phenomenon but is prevailing in all other professions including even the legal profession which does not depend on science and technology. This mystification is a feature of market economy and an instrument of exploitation and profit. Demystification at the level of practice can be brought by change in the economic relationship and not by replacing with more mystified traditional systems.

Professionalism : which also is utilised for profit and exploitation is similarly a feature of commodification of medicine and has little to do with systems of medicine. With the gradual dimunition of the commodity character of medicine, China has curbed professionalism to a great extent. On the other hand, in post-revolutionary Cuba, professionalism has been encouraged and strengthened in a State monopoly health system but that did not pose any constraint in the way of establishing an egalitarian health care service. Though professionalism prevails in Cuba to an absurd extent (only doctors are entitled to give injections), still Cuba has made remarkable strides in raising the health status of the people and the health system is free from professional explotiation.

Individualism, Mechanicism, Reductionism, Class bias, Commodification, etc : These are not peculiar to any system but owe their roots to the economic base and the dominant ideology. Rather it can be conceded that modern medicine is least endowed with these vices because it has opened up the possibility of taking a materialistic and holistic view of health and medicine, owing to large expansion of the data-base and knowledge-base of the natural sciences and social sciences; growth of socialisation of production is bound to develop socialisation of medicine. Choice of systems of medicine has little relevance to this change.

On the other hand, a rational view towards all these elements should also be evolved. One who vigorously attempts to expose the bias of capitalist medicine against people's interests, may run the risk of making a fetish of these elements. Individualism, mechanicism, reductionism etc. are not touchstones that turn everything they come into contact with ugly. In all social functions, some practice of mechanicim and a reductionist analysis are inevitable at the micro level. Given the operation of socialist analysis and policy in the health care programme of a socialist society, at the micro-level it is reduced to providing treatment for sick individuals who, having similar socio-economic background, may happen to differ widely among themselves in respect of physical, psychological, behavioural characteristics as well as in the quantity and quality of their responses to medical intervention. Indeed, the situation is necessarily reduced to taking a mechanistic, individualistic and interventionist approach in performing the instant task of attending to a sick indivdual who is not only a number as featured in the policy and programme making at the macro-level, but also a human being possessing a distinct personality and capable to respond to and interact with, employing his own judgement, the medical provisions earmaked for him by the organised society.

The Real Issue

The real issue is to formulate, organise and develop an egalitarian health care service — with preventive, promotive, curative and rehabilitative

aspects. Such an ideal is realisable only in a non-exploitative economy. Doyal and Pennell have shown that in the Capitalist economy, development of medicine and organisation of health care follow the needs, priorities and prerogatives of economic relations. That is why we find changing emphasis on public health, curative medicine, individualistic medicine, population control and so on in different periods. "It is ultimately profit, rather than a concern to improve overall living standards, which is the most important determinant of economic and social decision-making in Capitalist society" (Doyal & Pennel, 1981). Rejecting the anti-technology, anti-industry and anti-modern medicine stance of Ivan Illich, and acknowledging its positive achievements in the health sector, they argue that modern medicine is neither a value-free science nor an altogether evil force, and that its till effects could be overcome in a radically changed socio-economic order. Indeed, the idea of changing the character and organisation of discriminatory and exploitative health care by choosing and introducing a particular system of medicine, itself appears to be a mechanistic, instrumentalist and utopian view. True, it is conceivable that mobilising the large number of traditional practitioners and comparatively cheaper herbal remedies under the State sector following the Chinese model, a large section of uncovered population may be offered some form of medicare. But such a view is hardly relevant in the Indian context on two counts. One — unlike China there is no state-monopoly control over the health system in India and hence it is not feasible. Second — it needs to be assessed first, if India lacks in the necessary number of trained personnel in modern medicine for the operation of Primary Health Care Service of comprehensive coverages Commenting that "the argument in favour of the use of traditiona practitioners does not question why even modern practitioners of private medicine have not been properly integrated into third world health care services", Oscar Gish stresses that the major obstacle is not the limited resources or technological deficiency, but the social system which places a low value on the health care needs of the poor (Gish, 1979).

Why then all these debates about traditional systems ? Since the political independence of the colonies, in the era of neocolonialism the poverty of the third world masses continue to be a headache of the imperialist camp. 'Economic growth' approach was introduced stating that the primary need is rapid increase in GNP which will necessarily trickle downwards to alleviate poverty. After two decades when this strategy failed, lately a new 'basic needs approach' has been advocated. Ibrahim Samater has, in an analysis of the strategy and tactics of the controllers of international economy, shown that this new approach is another attempt to contain the growing unrest among the exploited and deprived population of the third world, and that it is also bound to fail because without any change in the property system, in power relations and in the demand structure, the basic needs e.g. food-cloth-shelter-water-sanitation-health etc. cannot be met. The ruling class needs to uphold and maintain the image of the state as the benevolent arbiter for the masses and the state thereby needs to put priority on relief and medicare. Physical ailment, debility, death are extremely sensitive elements with political consequences. The benevolent image of the state distributing medical relief often atones for its other failings. One may be poor or unemployed but when the state is there to save him from death due to illness, the benevolent image brightens. But this benevolence is difficult to mediate through the provisions of modern medicine. The cost is prohibitive and will necessarily erode the profit margin reducing capital accumulation. The only alternative way appears to be the glorification of the achievements of the traditional systems with a coating of the theory of cultural compatibility. The culture of course, refers to poor people's culture — not of those who can afford to purchase modern medicine. The vigorous promotion of traditional systems by official and semi-official circles is not out of conviction in the efficacy and inefficacy of traditional and modern medicine respectively, but out of pragmatic political considerations with the purpose of co-opting and weakening any challenge to the existing exploitative socio-economic order which actually is the cause of the deprivation of the basic needs e.g. health care. An uncritical support to this strategy by the progressive health activists will be a liberal humanist deviation propelled by subjectivism.

From the foregoing it is evident that choice of a particular system or any integrated systems is of little relevance to the demand of a people-oriented egalitarian health system. The traditional system, at their best, can offer a few remedies in curative practice. A comprehensive health system will have to be based on scientific tenets, but while the underlying theoretical pre-conceptions of scientific will need to be critically re-examined to identify the elements of class-bias and mechanistic paradigm, the operative infrastructure should be explored to resist and eliminate the commercialism, mystification, professionalism of the medical practice. Scientific

medicine is a product of modern science developed in the Capitalist regime. While welcoming and practising modern Science and Technology in all fields of social life and economic development, rejection of modern medicine is not only anachronistic but utopian.

The role of traditional systems therefore appears to be limited to effective (organic and functional) remedies for medicare, employed under the same regulatory mechanism as that of modern drugs. Relevance of the apparently unending debate on the choice of a suitable system of medicine is only academic and sterile in the context of our search for a people-oriented comprehensive health care service.

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A SEARCH FOR ALTERNATIVES
Organising Vaidus in Gadchiroli

ravindra r p

Gadchiroli, a predominantly tribal district in Maharashtra is currently witnessing a new experiment in providing appropriate health care. The vaidus, local healers, of the area have come together to revive and even reformulate an ancient system of healing which is fast vanishing in the face of exploitative inappropriate medicare. A report.

Experiments in community health initiated in the seventies have now come to stay. There have been several attempts of evaluating such projects, the latest being by Sumathi Nair (SHR II.2.) With due acknowledgement of the contributions of these projects to community health, their limitations are being increasingly identified. The multiplicity of such models is low due to the requirements of heavy inputs in terms of resources like finance, know-how and skills, drugs, training and referrel facilities and personnel and so on In most cases, the political component of health/life of community s ignored, sidetracked or played down. Most such projects revolve around 'Allopathy" which brings with it its inherent limitations, moreover, although allopathy is the 'least unscientific' method, it remains culturally alien to most people.

It has thus become imperative to search for new alternatives, free from the above constraints. In this article, I wish to describe one such experiment of organising vaidus (traditional health workers) undertaken by the 'Paramparagat Vanaushadhi Vikas Va Samshodhan Kendra' (Centre for Development and Research in Traditional Herbal Medicine) in the Gadchiroli district of Maharashtra. However, neither the author nor activists of the 'Kendra' wish to claim that it is the only alternative. It can, at best, be one of the several alternatives. The form and content of each such attempt could depend upon local conditions and priorities of the experimenting group.

Gadchiroli (formerly a part of Chandrapur) is a predominantly tribal district on the borders of Maharashtra with MP and AP. In the 'fifties' it was a stronghold of socialists when Narayansinh Uike, the first tribal graduate from Vidarbha region of Maharashtra, organised tribals around issues of land distribution, education and atrocities by ruling classes. Recently, some activists of Chhatra Yuva Sangharsha Vahini (the same group which supports the Kendra) have succeeded in organising large numbers of landless labourers and peasants working under the Employment Guarantee Scheme (EGS). Attempts are being made to launch a broad-based 'Nisarg Bachao, Manav Bachao' (save nature, save humankind) agitation to oppose the proposed Inchampoli dam, which is expected to cause largescale deforestation and evacuation of many tribal villages in the nearby districts. Sukhdevbabu Uike, a follower of Narayansinh Uike and an activist associated with EGS and Nisarg Bachao has recently been elected to the Assembly from this area. All four MLAs from this district belong to opposition parties, much due to influence of activists in EGS and Nisarg Bachao.

The same team of Vahini activists has, for the last three years, undertaken the task of organising vaidus, with a view to evolve an alternative system of healthcare service which can be made available to the needy as and when required. It is not just a revival of an ancient system crumbling against the pace of changing times, but an attempt to evolve a dynamic system challenging the monopoly and mystification of established medical system. It would be integral to the cultural mileu of people and within their reach. It would be a system based on experimentation, experience sharing and an urge to serve the people (and not for profiteering). The team is trying to evolve democratic methods to achieve this object without the use of foreign aid or even possibly full-time workers. Judging by the meagre input of time, finance and people, it would be unjust to pass any judgement about this venture. However, their experiences undoubtedly point towards newer sign-posts in community health.

Vaidki in Gadchiroli Today

Vaidus are traditional experts in diagnosis and treatment of diseases; collection, processing, compounding and dispensing of medicines without any economic incentives. For them, this is a noble service, not a profession. They are mainly responsible

for health care of poor people, patients with chronic ailments and in far-flung areas yet inaccessible to modern health services. The transfer of knowlegde is mainly from father to son or to other worthy male member of community. In exceptional cases, where sons are unwilling/unworthy the knowledge is passed on to the daughter-in-law (but not to a daughter as she 'belongs' to a different family). Many vaidus, specially the educated ones, try to enrich knowledge gained from the Guru through experimentation and study of Ayurvedic texts. Vaidus in this area use drugs from plant, mineral and animal origin as well as mantras (chants) for treatment of physical and psychological disorders. They have their specialisation such as asthma, snakebite, veterinary diseases and claim to cure diseases untreated by modern medicine-tetanus, cancer etc. Although it remains to be seen how many of these claims stand scientific scrutiny, there are many instances confirming this skill in diagnosis and treatment. They follow several guidelines laid down in Ayurveda regarding the day, time and season of plant collection, diagnosis of diseases and processing of crude drugs. Some formulations used by vaidus are referred to in Ayurvedic texts.

Current Issues confronting Vaidki

The processes of 'development' and 'modernisation' have disrupted the socio–economic-cultural fabric which sustained and nurtured tribal life and specially their system of medicine and posed grave threats to their very existence. Like its counterparts everywhere, Gadchiroli has witnessed massive butchering of trees, disruption of the intricate eco-balances triggered by profit-hungry commercia interests hand in glove with government officials. An interesting example of 'modernisation' with total disregard to people's real needs is a dairy recently set up after destroying several acres of rich forest. Its premises have been declared as 'prohibited area' for outsiders. Hence vaidus are denied access to the few medicinal plants which have managed to survive in the compound. It's an agony to watch a patient suffer due to non-availability of a drug whose whereabouts are known, but which cannot be procured. The dairy has not in any way helped the tribals. It has only resulted in a complete drought of milk in the villages.

Large strips of forests are burnt by contractors for a better yield of tembhurni leaves (used for making bidies). Moh trees, of great economic, cultural and medicinal significance are burnt down and truckloads of coal sent to cities. The rich, symbiotic flora is being replaced by large scale plantations of monocultures of teak and eucalyptus. Many valuable medicinal herbs have become scarce, some extinct. Ironically, such 'modernisation' has encouraged supersitious practices. Due to the depletion of herbal medicines, many vaidus are resorting to more non-drug 'therapies' like mantras, talismans, animal-sacrifices and so on.

'Development' has brought to tribal towns a new exploiting species — 'doctors' who, posing as demi-gods, promise instant relief and cure-alls through miraculous modern drugs, ushering in a culture of injections and antibiotics. The 'moderno-philia' has lured people to spend their meagre resources on unnecessary (often harmful) drugs and cultivated in them distrust for their traditional system of medicine. (The is not to deny the utility of modern medicine but to protest against its present misuse).

Even then, established medical professionals often feel threatened by the skill and knowledge of vaidus. There was an interesting case of a veternary doctor who extraced large sums from people and was still unsucessful in a number of cases. The cases given up by him were then successfully treated by a young, dynamic vaidu. The people jeered at the doctor, who, in turn, lodged a complaint against the vaidu for practising medicine without registration. However, the village people unitedly stood behind the vaidu and did not allow the police to arrest the vaidu. With growing assertiveness and awareness in vaidus resulting from their organisation, more such attacks from medical establishment are likely to follow.

Vaidus manage to earn their living in difficult summer days by selling crude drugs to traders who take full advantage of the situation. Arjuna bark bought at the rate of 5-10 paise/kg is sold by middlemen to drug companies at the rate of several rupees/kg (that too after considerable adulteration).

The depletion of flora has forced vaidus to spend considerably more time and energy in collecting medicinal plants thus making them increasingly difficult to practise vaidki merely as a social service. Moreover, people now tend to visit them only when allopathic medicines fail. Even if they are completely cured by a vaidu's medicine, they follow the 'tradition' of not paying him, vaidus too follow the tradition of not asking for payment. In a society where status is increasingly being equated with money, vaidus are fast losing their respectable place in the community. All this has distracted the young generation from vaidki. In most cases, the

present generation is the last practising one. Various taboos have further restricted the transfer of knowledge e.g. the taboo on allowing a 'shishya' to part with information before his guru's death. Many learned vaidus have died without passing on knowlege to anybody. Thus, some valuable information has vanished for ever. Vaidki, today stands on the brink of extinction.

Vaidus' Organisation

Organising vaidus has been a great challenge for the group. Professional jealousy and mutual suspicion, complaceny, taboos on information–sharing, lack of lively contact with the outside world and prejudices among vaidus obstucted them from coming together. However, there have been some favourable factors too. The growing realisation of the gravity of situation by vaidus, consciousness gained through their experiences (direct/indirect) of organisation of EGS workers or on forest issues the ability of activist to relate individual/professional problems of 'development' and 'ecology' have helped vaidus to come out of their shells and join hands for a common cause. There have been several camps for mutual information sharing and frank discussion on common problems.

There are greater challenges ahead: initiating sustaining democratic processes of decision-making and implementation, evolving short and long-term programmes to give an expression to their organised might, cultivating a spirit of experimentation and enrichment of knowledge, arranging for their continuing education through interaction with other vaidus and experts in the field, carrying out field trials for verification of claims made by vaidus and most important, helping the movement develop independently without dependence on the activist group and yet retain its linkage with the wider struggles.

At present, the vaidus, on their own initiative have decided on the following programme : i) To spread organisation to a wider area. ii) To organise a series of camps — for information sharing on diseases and remedies discussion on common problems. iii) To set up a co operative for storage and processing of crude drugs (processed drugs fetch a much higher price) to directly bargain with drug companies so as to eliminate the middlemen. iv) Felicitations of senior vaidus at the hands of reputed vaidyas (ayurvedic practitioners) and making other efforts to create awareness in society about the role of vaidus.

The organising group wishes to try out a scheme wherein five acres of land obtained from the forest department under the Social Forestry Scheme will be used for cultivation of important medicinal plants. The cultivator will receive a small regular sum of money from the forest department for developing a forest on the land plus a part of the forest yield. This experiment, if successful, would help reduce the shortage of medicinal plants and also provide some monetary benefit. This may help to preserve the spirit of 'social service' intensely prevelant in vaidus. We believe that the spirit of selflessness is the one we wish to develop in tomorrow's society. So, this spirit already present in Vaidus should be encouraged. However, it is not yet clear whether it would be possible to nurture this spirit without their exploitation in present system.

It is difficult to say whether vaidus, long used to confirming to a particular system of healing will be open enough to freely discuss with others their understanding of diseases and drugs and perform experiments with scientific objectivity and make suitable changes in their practice. It also remains to be seen how formation of new forms of mystification of knowledge, and hierarchy could be prevented.

There are no readymade solutions to these problems. However, there is room for hope as experiences reveal the intelligence, innovation, scientific objectivity and passion for knowledge hidden in semi-literate folks. Natthuji's, is a glorious examole. An illiterate shepherd boy, he used to leave his cattle for grazing outside the school building so that he could overhear alphabets chanted by school children and revised them with help of friends fortunate enough to attend school. He learnt reading from the names of tins at a grocer shop. He cultivated his interest by purchasing books. He had the guts to experiment on himself and his son to gain confidence about his experiments. Today, he is assertive enough to tell the patient to choose between him and the doctor It is a pleasant surprise to see him at such an age, scan through books in search of new information. So, when Natthuji says, "Well, it's not impossible to build and sustain vaidu's organisation for peoples benefit", there should be at least some reason for hope.

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POLITICAL-ECONOMIC-STRUCTURES — APPROACHES TO TRADITIONAL AND MODERN MEDICAL SYSTEMS

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Abstract— The paper is concerned with the WHO-UNICEF suggestion to train indigenous healers to be first-line deliverers of medical care. Rather than evaluate this proposal directly, the paper concentrates instead on the factors currently influencing the relationship between indigenous and Western medicine. A framework, viewing the potential health impact of the use of indigenous healers, is constructed through the comparative method. [6] *Data reviewed consists of monographs, journal articles, dissertations etc., and considers historical, cultural and political theories of the status of native medicine. The paper concludes that the politics of health care is a greater impediment to the provision of "health care for all" in some types of political economic systems than in others. Thus events in the health care system are seen as influenced by the larger socio-political system. This article is reproduced from "Social Science and Medicine" 15A : 101-108, 1981.*

Introduction

Medical need in the developing world

The scarcity of medical service in most of the world is one of the factors affecting the health of the peoples of the earth. Although the outcome of medical care is greatly hampered by poverty, associated problems of malnutrition, poor sanitation, crowding and lack of education, the social and economic gap between the have and the have-not nations extends to the area thought to limit the destructiveness of disease and ill health. Bryant discusses this, perhaps more eloquently than others :

> Large numbers of the world's people, perhaps more than half, have no access to health care at all, and for many of the rest the care they receive does not answer the problems they have. The grim irony is that dazzling advances in biomedical science are scarcely felt in areas where need is greatest. Vast numbers of people are dying of preventable and curable diseases or surviving with physical and intellectual impairment for lack of even the simplest measures of modern medicine. Whatever the desires of nations to reach their people with health care, the actual task of doing so is extraordinarily difficult. It is difficult in Malawi, one of the world's poorest countries, and so is it difficult in the United States, one of the word's richest... [1,pp.X 51].

Country	*Expenditure*	*(%Budget)*	*Population/bed*
Jamaica	$9.60	11.0	240
Senegal	3.47	6.6	700
Thailand	0.60	3.4	1280

Health expenditures vary from between 56 dollars per inhabitant in the United Kingdom to 20 dollars in Indonesia. Eleven precent of Colombia's budget provides 3.50 dollers per inhabitant while 4.7% of the United States government expenditures means 47.40 dollars per inhabitant for health services. The meaning of this is clear in the preceding tabulation of number of hospital beds, whose definition can range from a canvas cot to an electric-powered special. The preceding and following statistics are from Bryant [1] for the period 1961-1964.

The discrepancy between urban and rural areas can exacerbate the problems of providing care. Part of this is due to personal reference:

> The reluctance of doctors to leave the big cities and go out to practice their profession in the rural areas is a long standing basic medical problem which Mexico has in common with all other Latin American countries [2,pp.262]

The result of this reluctance? A difference in the rural-urban physician ratio (1:3000 vs 1:500). This is not just a local phenomena. UNICEF-WHO estimate "that in a number of developing countries less than 15% of the rural population and other underprivileged groups, such as slum dwellers, nomads, and people in remote areas have access to health services". [3]

Another reason for rural shortages of medical services is lack of resources. Many of the underdeveloped countries are predominantly rural and, as our earlier comparisons showed, lacking financial resources even for urban areas.

At the University in Kampala, Uganda, the press of obstetrical patients is so great that the average hospital stay for delivery is less than 24 hr. At Sierra Hospital in Bangkok, Thailand fully half of all hospital admissions, 17,000 of 34,000 in 1 year, are to the obstetrical service. But despite the overwhelming numbers of obstetrical patients in these two institutions in these countries at large, less than 15% of all babies are delivered by trained personnel [1, pp.41].

Thus, the provision of medical services to all is a problem, particularly so when the lack of resources is coupled with attempts to provide doctor-hospital Western-style services to rural areas.

Indigenous medicine

The previous discussion neglects the presence of medical services in all socio-cultural units, Bryant[1] and Schendel[2] note the influence of local healers and the belief in magical medicine. Bryant notes that accessibility of care and reduced social distance are also factors in their utilization; Lee[4] points out that in Hong Kong it is easier to find a Chinese practitioner (4506) than a modern physician (2317). By deduction we realize, when Bryant tells us that only 15% of a nation's babies are delivered by trained physicians, that the other 85% are assisted into this world by someone (usually, but not always, by someone other than the mother). Stromberg stresses the reliance on local healers in Ghanna for the 70-80% of the population living in rural areas. He states that the absence of modern health facilities, in Ghana as in other countries, does not mean there is a vacuum in the rural areas,

> ...as in many other countries, traditional birth attendants, healers, herbalists, and practitioners of various types exist in most villages and treat many diseases and other health problems....thus there is a health care system throughout the country which is consonant with traditional beliefs and practices [5,pp. 15].

WHO-UNICEF[3] agree and suggest the different types of indigenous healers may be trained and integrated into the general health system.

This solution seems like a panacea. Given the shortage of medical dollars, personnel, and facilities, problems of transportation, the social and cultural acceptability of new ways, *why not* train indigenous healers to care for the medical needs of their communities? The someone delivering 85% of two countries' babies might benefit from training. Furthermore, most of the medical needs of the world are not complex :

> It involves recognizing threats to health that are visible and monotonous : malaria, diarrhea, pneumonia, bilharziasis, hookworm, malnutrition, tuberculosis—or problems that are less a threat and more a personal concern : leg-ulcer, earache, constipation, headache, broken finger, inflamed eye [1,pp. 61].

Given the potential for traditional healers to provide health care that is affordable, accessible, culturally relevant, belongs to the people, and has the possibility for serving as a conduit for new ideas in areas other than medical—what factors influence the relationship between it and modern medicine? There are several theoretical approaches that may be taken. To answer the question, why not utilise indigenous medicine, it is also necessary to investigate the imbeddedness of the current relationship between modern and traditional medicines in the social system. That is, various factors have led to the exclusion of native healing systems from most modern medical systems. What are these factors? How might they relate to the utilisation of native medicine in a modern setting? What happens to the indigenous medical system as a nation Westernises (modernizes, industrializes, develops)? This, then, the factors influencing the utilisation of indigenous medicine, is the focus of this paper. But first, the methodological issues must be discussed.

Toward a framework—the patched-up design

To answer the question, what factors have determined the status of native medicine, requires a comparative approach. Factors thought to be explanatory for one time and place can be shown to be epiphenomenal and hence irrelevant in another. We will find in the next section that the integration of modern and traditional medicines has varied from one country to another. Why? Cross-national comparisons of health systems is one method of looking at health services organisation.[6] This approach is, however, fraught with difficulty :

> Those engaged in the study of comparative health service systems still struggle with problems of theory, method, and standards for cross-national research. In addition, the available data are too often fragmentary, unreliable, non-comparable and subject to political constraints [7,pp. 278].

Elling (see also Elling and Kerr[8]) has introduced a method for cross-national comparison — the method

of contrasting case studies :

> Given the controlling character of the societal context, the concluding point of this brief introduction to the contrasting case studies framework will be that inferences about health services organization may be culled broadly from sharply contrasting systems, but it is likely that cross-system applications can occur only between those with somewhat similar levels of resources and similar political structures [6,pp. 268].

The principle behind this is elegant. The *method of difference*, as expounded by John Stuart Mill is one of his four types of evidence that can be used as evidence for a causal relationship, or in our case, to control for extraneous factors. It states that if various situations have all factors in common but one, that may be regarded as the causal factor.[9] Elling and Kerr[8] found that this principle could be used to identify countries that are over- and under-performers in health, wealth and education levels being similar. The comparative approach will be used here. In other words, possible explanatory factors will be tested by the method of difference for one set of countries; eliminating these, we will then discuss other factors elsewhere. This approach is not without dangers. Campbell and Stanley [10] discuss the dangers inherent in experimental design. They are critical of this type of comparison, stating that it does not control for the selection of the groups to the initial purported causative factor or the loss of groups from this factor. More simply, there is little way of knowing what additional factors are responsible for the initial conditions. They describe a more refined variety of this model as a patched-up design with an inelegant accumulation of precautionary checks. The defense of this approach is twofold : First the world refuses, at least thus far, to be standardised to the interests of science; second, it must be asked if the lack of strictly comparable evidence is to limit the questions we may ask. This is addressed by McGranahan [11], who considers that perhaps cultural and social diversity is too great to permit international measurement. He feels that the need for data in formulating international social policy dictates continued comparative social research. It is the wish of this author that reports of this type, where quantification is deemed unnecessary or impossible, are, if not totally accepted, a stimulus to the further refinement of hypothesis of a broad perspective.

Factors Influencing the Use of Indigenous Medicine

Culture and progress

Galdston[12] differentiates between medicine as the science and art of healing the sick and caring for the well (a body of knowledge), and medicine as the practice of that science and art (the performance of a profession). The relationship or lack of it between traditional medicine and Western medicine is dependent on both parts of this definition. Medicine as a body of knowledge will be discussed in this section; the professions of medicine in the following section. This paper has not differentiated between the various types of native healers or different levels of theoretical complexity of medical systems as suggested by Marchione.[13] In contrast, Sigerist feels that all systems of medicine contain basic underlying similarities:

> There can be no doubt however, that primitive medicine, as it appears within the various culture patterns, consists of a relatively small number of elements, which are very much the same in all primitive cultures and vary only in their combination [14, pp. 121].

Marchione [13] states that distinctions between three types of indigenous systems may affect the reaction to it by society and other professions. The next part of this section demonstrates the reverse of relationship suggested by Marchione who sees full-time practitioners of great medicine accommodated and given support while part-time practitioners are ignored, and folk healers tolerated or opposed. We discuss three systems on an equal level of complexity. Thus, this factor is controlled for. Yet, any future attempt to integrate a native healing system into a modernising one would be well-advised to consider the characteristics of the native system, for more practical and mundane reasons.

Most studies of health care systems avoid the traditional (e.g. Weinerman [7]) or give it minimal attention, regarding it as a survival from a more primitive, less scientific, time. Attention is focussed on the scientific progress of medicine such as is suggested by Galdston:

> History is a progression of ideas, traced along a circuitous path [12, pp. 3-6].

Garrison [15] is kinder and suggests that folk medicine brings the peace of security against the fear of the unknown. Folk medicine also has its defenders. Dr Bocan Alpha Ba (International

Conference on Health and Health Education) believes that "traditional medicine deserves respect".[16] He states that African doctors turn to traditional arsenals when supplies of Western pharmaceuticals are short. Green [17] comments upon the astonishing technical efficiency of primitive surgery, given the most ancient instruments. Sigerist observes that little medical progress has been shown in some areas:

> This history of the therapy of cancer is very dull. The principles we are following today, namely the elimination of the tumor as radically as possible, were discovered in far remote antiquity. Our operative methods are much more efficient than theirs were, and besides the knife we have X-rays and radium to destroy the tumor cells, but we have not found any new principles yet [18, pp. 62].

One view is that traditional structures are inferior in all ways to modern medicine and are used by only the poor or ignorant: Banerji.[19] notes that the inhabitants of his native land prefer allopathic (Western) medicine irrespective of social, economic, occupational, and regional considerations. Cost and accessibility of services were the two major constraining factors. Local healers were used for minor illnesses or when Western medicine failed, Lee[4], however, points out that in Hong Kong the correlation between utilization of modern medicine and wealth ($r = 0.68$) was in the same direction as between Chinese medicine and the wealth of the area ($r = 0.54$). Futhermore, it seems that people choose rationally between the two on the basis of perceived effectiveness for symptoms. Although the exact statistics were not provided, the younger generation was said to make more extensive use of Western medicine.

An approach that makes the assumed inferiority of traditional medicines more explicit is the historical approach. This approach stresses the evolution of medicine, both empirically and conceptually. Garrison[15] observes that the advancement of medical science is the history of the discovery of a number of important principles leading to new views of disease, to the invention of new instruments, and to the development of a rational scientific concept of disease, not as a demon but as an altered physiology. Kuhn[20] critiques this view, rejecting the accretion approach to progress while retaining the concept of the progress of science. This approach fails to note that most medical systems have performed adequately for the cultural level of the people. Furthermore, some have been medically effective. Bernado Ortiz de Montello found that 16/25 of Aztec drugs produced the desired effects, 4/25 were questionable, and 5/25 were not good enough.[21] Knowlege, then, is not exclusively Western.

It strikes one as strange that the social and psychological functions of medicine are given stress only for the primitive versions. All medical systems seem to function to allay fear of death and infirmity through professionalism (elitism), and in this sphere shamanism differs little from white-coated magic. On the social level, there is evidence that the theoretical perspective of medicine relates to its functions as an integrative institution of society. When society is held together by fear, medicine is synonymous with witchcraft and magic; as religion becomes dominant, disease and sin coincide; later, in a rationalist society, science is the new god: from temple to cathedral to medical center.

Another explanation for the apparent decline of traditional medicine is closely related. It suggests that the populace rejects it in favor of more modern medicine, or is it retained due to their ignorance of poverty? Sigerist[14] suggests that the development of magical-religious medicine in Greece was a result of the needs of the indigent sick. Lee[4] points out that economic factors influence the distribution of Chinese medicine. Harwood[22], Logan[23], Martinez and Martin[24], Rubel[25] and Snow[26] provide evidence of the continuing utilisation of native healers by populations of Mexican Americans, Arizona Blacks, Guatemalans, and Puerto Ricans, Schendel[2] traces this cultural lag to superstition, while Foster[27] cites the cultural barriers to change. However, DeWalt [28] is able to show that the use of native curanderors (curanderas) in a Mexican village is the result of a rational process of choice related to the nature of the illness.

How important is the progress of medicine as a factor in determining its role in modernising societies? Is it only the internal characteristics of a medical system that determine its fate? A cross-cultural historical study by Leslie[29] sheds much light on this topic. He shows that traditional medicine in three countries, China, Japan, and India, sharing somewhat similar cultural factors, had a different fate in each. He shows also that the Greek, Ayurvedic, and Chinese medical systems share similar internal characteristics—they are based on humoral theories, have standardised learned practices, long periods of training, codes of ethics, and claims to social status. Yet their incorporation

into modernising medical systems varied. In Japan, the ruling elite adopted modern scientific medicine as the legally sanctioned system. In China, the incorporation of traditional practices into an essentially Western system occurred. In India, a dualistic, though not completely equalistic, system developed. Thus, neither cultural nor internal characteristics of medicine account for this difference.

Another theoretical explanation for the status of traditional medicine is seen to be the organisational struggles of medical professions :

> A characteristic of modernizing societies is the co-existence of modern and traditional professions that claim to perform the same function for the society. As a result of differential support by the dominant classes and their social values and by the academic and political authorities, the modern profession occupies a higher statification ranking than the traditional professional [4, pp.60].

The theory of professionalism, the organization of medicine, as the explanatory factor, for the survival or lack of survival of traditional medicine will be discussed in the next section.

Theories of professional struggles

Much of the work in cross-national comparisons of health systems ignores the political-economic level of organization intermediate between macro-processes (society) and micro-processes (persons). One notable exception to this is the study by Carboni[30] of the formation of a geriatic speciality in the United Kingdom which has not occurred in the United States, to date. Carboni traces this to the division of medical territory by the medical profession in the UK rather than to a more rational, knowledge-based division of labor, an explanation suggested by Stevens[31], for example. This division, then, was based in political processes within the profession to the end of controlling medical resources (wealth, patients, and control over an area of service). This approach has been offered by Berlant[32] as a framework by which to understand the rise of allopathic medicine in the United States. Before examining this approach, it is necessary to mention that the view of individual practitioners may diverge from the organisations perspective Blum[33] found both acceptance of the significance of local healers and rejection of their existence by physicians in his study of a rural Greek town. One famous healer had even hired a physician and X-ray technician to work as his assistants. This occurred despite government and professional opposition to quackery.

Berlant[32] describes the process by which the AMA organized and defeated its medical rivals. He critiques Parson's characterisation of the medical profession as a normative structure, based on idealised beliefs, regulated by a system of social controls, and whose function is to maintain healthy actors to fulfil social roles. Instead, he uses an historical approach, coupled with Max Weber's theory of monopolisation, to show that many of the practices of the medical profession function to increase the power, prestige, and wealth of the profession collectively, regardless of the benefit to society or the individual patients. Weber s theory of monopolisation states that :

> The success of a group is a function of two broad determinants of economic action: the group's tactics of competition (or of conflict) and the conditions of competition. One major but not exclusive condition of competition in modern society is the state, which exercises both authoritative and de facto domination over groups within its territory [32, pp.17].

The tactics of the AMA will be discussed here; the role of the state in the next section. The elimination of external competition is accomplished by two means, according to Berlant.[32] The first, which he sees as the dominant methodology employed by the AMA, is to bring the "force and prestige" of the legal and political community to bear against competitors. This involves licensing and educational restriction. The goal of this strategy is to restrict financial support to one's opponents. The second method is to challenge one's opponents on ethical grounds, thus challenging their symbolic integrity (image).

The second game, that of name calling was practised by both sides:

> The AMA (circa 1924) referred to all nonconformist healers as "sectarian". Its Judicial Council has defined this term to include any practitioner who follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and practice,
>
> ...Abraham Flexner, the eminent authority on medical education, contended that homeopaths, eclectics, physiomedicals, and osteopaths might rightly be considered as sectarian rarher than fraudulent practitioners, since they all believe

that anatomy, pathology, bacteriology, and physiology must form the foundation of medical education but regarded chiropractors and mechanotherapists as no more than unconscionable quacks.

.. In charging that conventional practitioners laid undue stress on chemical compounds and surgery; these groups, with some justification, considered regular doctors as sectarian [34, pp.2-3].

Despite his moderate stand toward the variety of medical practitioners, Flexner's report on medical education (1920-21) proved to be the coup de grace to most non-regular medical practice. Stevens[31] speaks of the reluctance of the general public (USA) to use the modern (regular) physicians because of their harsh treatments. They were popular as a status symbol among the urban rich, due to the prestige of their European education. Burrow[34] claims that the battles of the AMA to control licensure and restrict entry to and the proliferation of medical schools was against quackery.

Berlant views the demise of the sectarians as casualities of the internal battles of the AMA. He considers the number of irregular practitioners too small to be considered a threat, at most 10% of all practitioners. Estimates of the numbers of homoeopathic practitioners are 2400 between 1835 and 1840. At most, there were some 7000 sectarian practitioners in the 1845—1860s as compared with some 20,000 orthodox medical graduates and another 40,000 non-degreed orthodox matriculants. This was the real threat : the rapid expansion of medical schools and the large number of educated physicians. Six medical schools in the decade 1810—1820 produced 100 graduates out of 650 students; this increased so that by 1860 there were 13 schools comprising 4500 students and graduating 1300 in the 1850—1860 decade. [32]

Berlant describes the tension between academics and practitioners for control of the medical profession and licensure. Medical societies were formed in the 1760s and not until 1783 was a medical school, Harvard, the first serious candidate for establishing the qualifications of a physician.[31] The AMA, established in 1847, soon reached a compromise position with the development of a licensure plan whereby a diploma was not an alternative to licensure but a pre-requisite. It then proceeded to regulate the supply of medical schools and hence physicians [32]

The growth of medical schools had been phenomenal :

> In 1869 according to the Bureau of Education there were 72 medical colleges in the US, 59 regular, 7 homoeopathic, 5 eclectic, and one botanic... (By 1911 every city had their schools) 39 in Illinois, 14 in Chicago, 42 in Missouri, 43 in New York City, 27 in Indiana, 20 in Pennsylvania, 18 in Tennessee, 20 in Cincinnati, 11 in Louisville...one physician for every 691 persons in the United States contrasted with 1:1940 in the German Empire; 1:2120 in Austria, and 1:2834 in France (circa 1913) [15,pp.761-763].

The AMA responded to this by supporting two investigations of medical education. The first, run by a physician, raised an uproar, but created little change. The second, headed by Flexner, led to reform and the securing of a medical monopoly by the AMA. Stevens [31] sees the impact of this report as largely financial; foundation money from the Carnegie Foundation, General Education Board (a Rockefeller Foundation), and other sources enabling the better schools to improve while others declined due to lack of support.

The role of government

As discussed earlier, Weber considers the role of the state as one important condition in the survival of an organization. Leslie's cross national historical account. "The Modernization of Asian Medical Systems",[29] stresses the influence of government policy. He shows the Japanese ruling elite adopting modern scientific medicine as the legally sanctioned system. The Chinese incorporation of traditional medical personnel and practices swings with the pendulum of political change (Wolstenholme and O'Connor[35] : Harbison and Myers [36]; New and New[37] ; and Sidel and Sidel [38]). In India, the ambiguity of government policy has led to dual medical system.[19] Lee[4] details the parameters of environmental support in Hong Kong. The government employs one-quarter of the modern, but no Chinese, physicians. Anyone can practise Chinese medicine without a licence but there is a registration fee of twenty-five dollars. The practices of Chinese physicians are restricted. They are not allowed to issue death certificates, to use medical titles, or to use certain restricted medicines. Schendel[2] describes the incorporation of Spanish and Aztec medicine after the conquest (Cortes) under royal orders, and the diffusion of Aztec pharmacopoeia into Europe. When Germany passed a statute on June 21, 1869, abolishing some of the physician's obligations, the result wes an increase in the number of nature and faith healers.[15]

Berlant considers that the growth of the AMA and its monopolistic advantages were linked to the rise of state power which was then able to bolster the power of the profession. He then asks what is the advantage to society of allowing monopolization. He feels that an explanation in terms of the public interest is not convincing in light of the differential distribution of the benefits of medical care and he suggests an alternate explanation that is reminiscent of Duff and Hollingshead[31]

> Particularly in the United States, the development of the medical profession has been closely tied with the development of stratified relationships between social groups, so that quality medical care has tended to be a prized scarcity and an object of class behavior [32, pp.505].

This explanation is good but medical care as an object of class behavior does not tell enough. Elling[40] sees a close relationship between the nature of society and the nature of the health-medical systems.

It can be demonstrated that there is a correspondence between support of the indigenous medical system and the type of political system that exists. Elling (personal communication) has suggested a typology of countries along two continua — the centralised-decentralised power dimension and the concerted-pluralistic action dimension. Thesec oncepts refer to the general nature of the formal (centralised decentralised) power structure as well as to the informal (concerted, pluralistic) dimension of power. It is possible to assign countries to one of four cells as in Table 1.

Table 1. Political structures

	Centralized	Decentralized
Concerted	USSR	China
Pluralistic	India	USA
	Mexico	Canada
	Japan	England
	Hong Kong	

Table 2. State support of indigenous medicine

Type of Support	Country			
	Japan	China	India	USA
Symbolic	Medium	High	High	Low
Financial				
Educational	Low	High	Medium	Low
Research	Low	High	Medium	Low
Practice	Low	High	Medium	Low
Legal				
Licensing	High		—	Low
Education	—	Medium	—	Low

Table 2 shows the varying degrees of support that a medical system may receive along different dimensions. Scores of high, medium, or low reflect action taken relative to that of other countries. Symbolic support is defined as actions taken by the government of a country to preserve indigenous medicine as part of the heritage of a country. Japan is rated medium, not because it has considered its medicine a heritage[29] but as compared to the United States, there has been little persecution of indigenous healers[41] China[29] and India[19] have recognised the cultural roots of their medicines. Japan provides no funds to native medicine but does require licensing of native practitioners[42], thus granting them recognition and legitimacy. China does support traditional medicine financially but not at the level of modern institutions.[29] Licensing of medical practitioners was abolished in China along with the leveling of other professionals, but traditional institutions have received government recognition. India has made some grants available for the study of Ayurvedic medicine and the provision of services[19] A subjective guess would be that it is less than that provided in China. Regulations for licensing of medical practitioners and traditional schools are currently being decided in India (communication from Pandit Shiv Sharma, in visit to UCONN Health Center in 1975). These countries contrast with the United States where non-modern forms of healing receive no support.[43]

How does medical care in a country relate to the form of goverment? We see from Tables 1 and 2 that only the United States, a decentralised, pluralistic country has provided no support to any but the most politically powerful medical organization. This is the result of a system where health is not a national priority, where there is no system, program, or prioity of expenditures for health. It appears that only centralized and/or concerted countries refuse to allow the battles of professionals over the carving up of the medical arena to interfere with the delivery of health. Bryant[1] makes the point that health programs can also be divided among government agencies. A few examples will

suffice. Current philosophy in China dictates that the purpose of the medical and educational system in china is to serve the people.[44] In fact, it has been noted that one problem of Chinese education is its overly ut litarian nature.[36] This signifies not the absence of professional politics but their subordination to national policy. This has occurred also in Russia where feldschers were employed despite professional opposition[15]; in India where Ayurvedic physicians have not been embraced by the medical establishment[29]; and in North Vietnam were Western and Oriental medicine is being combined.[45]

Conclusions

This paper has discussed some of the factors influencing the status and utilization of native healing practices in the modern world. Though cultural and internal factors may affect the utility of traditional medicine by encouraging bad practices and discouraging new ones, it is equally certain that this medicine of the people contains effective practices and new ideas. Thus, the links between it as a knowledge system and its role in medical system has been tenuous. The role of professional struggles in the medicial arena as the dominant factor has been tempered by the Influence of government where it has been able to direct medical priorities. It has been suggested that in centralized governments or in those where action is concerted, the government is able to set priorities; in other situations, such as the United States, health priorities are the outcome of professional struggles.

From this, it is evident that the outcome of employing traditional medical structures to meet the health needs of the world will depend to a large degree on its interface with professional organizsations and the type of relationship it has with the government, either controlling or controlled.

The question, however, remains unanswered. Why do different kinds of political systems allow their policy or lack of it to benefit medical power groups? Several different models of the articulation between the medical system and the political system exist. Krause discusses the imbeddedness of the health system at several levels: The first is the level of values —

> First there is the issue of occupational ideology inherent in the term profession itself. What citizens believe the medical profession to be determines how they act in accordance with this belief [46, pp. 36].

Friedson[47] agrees with this view and criticizes the medical profession for usurping values when their claim to power is technical expertise. We suggested earlier that the relationship of medical systems to political systems was not due to cultural factors such as the state of knowledge of the profession or acceptance by the local residents, but rather to the nature of the relationship between the health professions as organizations and the form of government. We also noted that symbolic support is one means by which a profession may survive and obtain other types of support.

Krause[46] also suggests that control over the delivery of health services varies according to the ownership and control of health service production. This theme is explored in greater detail by Navarro, who makes the point that physicians no longer control the health system through the power of their knowledge. Primitive, or what Navarro calls competitive capitalism, has given way to monopoly capitalism : Health is the ...

> ... second largest industry in the country... the flow of health insurance money through private insurance companies in 1973 was 29 billion dollars slightly less than half of the total insurance — health and other — sold in this country in that year. About 515 billion dollars of half of that money flowed through the commercial insurance companies... [where] we find again a high concentration of commercial capital [48, pp. 150].

Navarro continues that the same corporate interests which control the American economy also dominate the health sector. Although physicians qua physicians are losing Influence as the source of power shifits from entrepreneurial to corporate sources, physicians still remain part of the dominant class in terms of economic position and many are now members of the corporate class. The medical system is one way to reinforce the values of and contribute support to capitalism.

Elling (personal communication) suggests that it is this context of the health system that in the end determines if the utilization of traditional medicine is to be of real value or if it is to be a delaying action to perpetuate second-rate medical care. Professionalism, coupled with a stratified society, can serve to thwart the intention of the use of indigenous healers — the provision of better medical care. Thus we find a rural midwife program in Arkansas training women for rural service.[49] But

in fact this program is designed to preserve a two class system of medicine whereby the rural poor mostly black, are receiving minimal care, with little or no access to special services while the wealthy white are treated in medical facilities by doctors reluctant to serve the countryside. Or there is the paradox that is now occurring in India, where the use of indigenous practitioners will mean less available medical care As a by product of their struggle to achieve recognition, Ayurvedic medicine practitioners have agreed to limit the number of practitioners they will certify and train. The price of legitimacy and other support is diminished service to the population. One must question, then, the use of indigenous healers — who is to benefit? — and who is to gain? Their utilization cannot be separated from the influence of the medical system and its position in the socioeconomic and political systems of a country.

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'GREEN REVOLUTION' AND HEALTH
Changing Patterns of Health in Nanded

sunil dighe

The green revolution and the changing patterns of agriculture have resulted in a deterioration of the health status of the people. The health services are a source of exploitation in one way or another. In the meanwhile, the rich tradition of herbal medicine is disappearing through disuse, which is itself a result of changes that have occurred in the wake of the green revolution.

"The condition of the working class is the real basis and point of departure of all social movements of the present because it is the highest and most unconcealed pinnacle of the social misery existing in our day", (Preface to *The condition of the working class in England* — F. Engels).

Every major or minor change in system has raised the hopes of improvement in the lives of the poor and created illusions about the present process of development. New policies have been drafted and redrafted at the international and national level to eradicate poverty and to change the lives of the 45 crore poor people living below the poverty line. But no significant change has taken place. As admitted by then World Bank chief Mc Namara in his 1973 Nairobi speech, the problem of the world's 800 million poor people has remained unsolved.

The new approach of attacking poverty began in 1975 on a world scale and in India also. New schemes of rural development to eradicate poverty were introduced. And their health was given importance. It was a target-oriented package programme. What is happening in the country side since 1975 is worth studying.

Although the green revolution began in Maharashtra since 1965-67, its spread and growth is now restricted. Thus the problems have increased and the crisis is accentuated. The old picture of village life is not found now. Alongwith the deteriorating socio-economic system, we find the health of the people is very much affected and has deteriorated.

The area under study is Biloli taluka in Nanded district of Maharashtra. The district is divided into eight talukas and among them Biloli has the highest levels of irrigation. Most of the irrigation schemes were completed by 1975. There are three medium irrigation schemes functioning in the area. Total population in the district is 17,47,589 spread in 1388 villages. The major crops grown are jawar, wheat, rice, cotton, chilli, and now sugarcane. Seedplots producing cotton seeds are situated in highly irrigated area. Even banana plantations are ample in number. This area is wellknown for producing long staple cotton. Now, four sugar factories are producing sugar and alcohol. Out of these, one factory is in Biloli taluka.

Changing patterns of agriculture : Effects on health

Due to changes in the cropping pattern and switching mainly to cash crops like sugar cane and cotton the production of foodgrains has declined in the area. So the old system of cropping, mixed-cropping, is disappearing. Turmeric, another cash crop was uprooted firstly in 1972 drought and by the government policy to favour supply of water to sugarcane. Similarly, ground nut is not favoured by the government. In 1983-84 canals became dry due to water-shortage. And though the government initially announced guaranted irrigated water to groundnut crop, only once or twice did the canal receive water. So all the groundnut crops of middle and poor peasants were destroyed. The rich could irrigate with the help of powerful electric pumpsets. In non-irrigated area chilli is still grown. But in irrigated fields, chilli crop cannot be grown now as the land is saturated with water which is not suitable for growing chilli.

There is significant decline in the area under pulses. Partly because there is no increase in the relatively low per acre returns. Another difficulty with the pulses is that it cannot be grown with hybrid kharif jawar. This is a short-duration crop. This reduction in the acreage under pulses has cost a lot to the village poor because, pulses used to maintain the fertility of the soil (nitrogen fixation). And people used to have their balanced diet. As the diet mainly consists of hybrid roti, sometimes, rice and watery dal (mainly tuar or udid), their

diet has not remained a balanced one as it used to be. Other crops like sweet potatoes which used to be poor man's emergency staple food, have also disappeared.

Thus, we see dependence of people on cash crops resulting in a decline in pulses production. This change in crops pattern has increased dependency on high cost chemical fertilizers and upset the traditional soil preservation mechanism and resulted in decline in the health of the people.

Anti-people forest policy

The present forest policy of the World Bank and the government has contributed to the destruction of agricultural people's living conditions. All the old variety of trees, like malwa, kath khair, sag, bamboo are not planted by the forest department on a large scale. Instead, subabhul and eucalyptus are planted on a large scale with the result, more wood is supplied to the paper mills and groundwater shortage has increased. Many old varieties of the tree had medicinal value and herbs used to grow around them. Their disappearance has created an acute shortage of such country medicines. Even in villages, old tamarind trees have disappeared. People are using less tamarind in their diet. The effect of this new forest policy on the ecosystem is tremendous.

It has also affected agriculture, since wooden implements depend upon the forest. The new varieties of trees are not suitable for house construction or cutting the implements from wood. Even firewood shortage has become most acute. People burn any type of shrubs and wood for cooking purpose even though it is unhygenic. They have to spend more time in collecting firewood. Due to shortage of wood, the size of the huts are getting smaller and narrower which is again unhygenic. The result is diseases like asthma, cough and other respiratoty problems are rampant. Old chullah still exist even though tractors and high yielding varieties are introduced by new technology. The chullah creates pollution problem within the huts.

Due to increase in the cost of living, all the earnings of the family members are spent on only survival. The cash economy has changed the situation considerably in this area. As the saving of the poor is virtually nil, for sickness expenses, they have to borrow from landlords, rich peasants or money-lenders.

Plight of non-agricultural workers

Those who work on State Employment Guarantee Scheme (EGS) as labourers, are supposed to get as per law medicines if they become sick on duty. They must get drinking water at the worksite. Usually, the worksites are far away from the villages. Most of the time, EGS workers do not get ordinary medicines when they get headache or fever, or if an accident takes place even first-aid boxes are not available. At site they get contaminated water for drinking which causes waterborne diseases. This is rampant in the area resulting in loss of several mandays due to sickness. The law has made a provision for shelter and cretches at worksite. But rarely are these provided. We find infants and young babies are looked after by small children while the mother is working on the site. Last year a labourer died on EGS site in a village in Biloli taluka due to both starvation and sickness. (This matter was discussed in the Maharashtra Assembly). The reason was that he had not got his wages for more than fifteen days.

The sugarcane factories also pose new problems. The molasses accumulated near factory creates pollution problem for the peasants living near the factory. Water-pollution by the sugar factories is so much that many deaths have taken place in the villages near the sugar factory. Sudden death of animals after drinking water is quite common in the area. Even the hue and cry made by the press and organisation does not affect the sugarbarons and they continue to violate all anti-pollution norms. The health condition of sugar-factory workers is equally bad. They are exposed to pollution, chemicals and accidents due to outdated machinery.

Certain other factors also affect the health of the people. Adulterated edible oil has brought new types of diseases. Sometime ago strange kinds of jowar and wheat (imported) were distributed through the rationing shops. And after consuming them there was a virtual epidemic of skin disease. Similary, the imported wheat from US under PL 480 brought another variety of Mexican seed grass, which has since spread all over. This has made the land infertile and constant contact with the grass, spreads skin allergies and allergies affecting the respiratory system. (This is popularly known as 'Congress grass' and during 1975, Cong I Govt. banned the word 'Congress' grass).

Due to inflation, people tend to cut down

expenses on food items. For example, as the price of edible oil has gone up, women are using less quantities of cooking oil, not even using coconut oil for their hair. As the prices of medicines have gone up, ordinary tablets for usual ailments cannot be purchased by the people. This taluka has a very high incidence of leprosy, but only one leprosy centre is functioning.

Imperialist technology has improved HYV jowar, bajara, wheat and rice production in irrigated area but no breakthrough has been so far made on oilseeds and on HYV seeds for dryland farming. Thus, it has limited results for total agricultural growth in India.

Exploitative health care services

Medical facilities are available, for example in four big villages in the taluka. In this article we will look at two places : PHCs at Naigaon and Ketur. About hundred villages are connected with these centres. They are situated either at taluka head-quarters or at the villages where the most influential local MLA, ZP president or MP is based. The corruption at government dispensaries is so rampant that people tend to go to private doctors or the government doctors treat patients privately.

During the drought of 1980 and floods of 1983, various types of epidemics spread in the area. The government dispensaries and hospitals created such a situation that patients were sent back on the pretext of a scarcity of medicines. Kashtakari Sanghatana had to take up the issue, the doctors and dispensary staff were gheraoed for several hours. Only then was proper treatment given to the patients.

At the grassroot level, village health workers are operating. They are supposed to distribute medicine for ordinary ailments, malaria and so on. They are supposed to help mothers at the time of delivery. And to report to the PHCs when cases of epidemic or serious diseases are noticed. In the recent drive for birth control, they have to bring cases for family planning operations. Now it is lucrative business for them since the government gives monetary incentives to both patients and health workers. But generally stocks of tablets are not available with them or instruments are not availbale with them So people have to go to private doctors paying more fees or to the quack doctors.

The local organisation had to take up another issue since it affects the health of the people — "Bhanamati" (ghost or spirit) is a usual phenomenon and mostly women are 'haunted' by this in the villages. In reality, they are either psychic patients or ailments developed due to insoluble personal or domestic problems of feudal character. Many a time, patients became victims of superstition. So the local organisation had to takeup several cases and treat them in the Hospital after prolonged persuation. In the past five years, more cases of bacillary dysentry, flu, malaria are reported in the hospitals. Thus, even the health services have become a source of exploitation and people are not benefited though all the institutions are aided by government and international agencies.

Health under Green Revolutions

Changes have occurred in the attitude of the people towards health and medicine are quite obvious.

(a) All the old herbal, country medicines have disappeared and the trend of widespread use of allopathic medicines has been stabilised. It is known that the sarpgandha herb is used for serpina tablet for blood presure or heart problems Similarly, some old medicines based on herbs and minerals are quite effective. But little further research har taken place.

(b) Due to hard work, hectic life and mounting problems, people tend to ignore their health unless health problems become serious when they go to the doctor or the dispensary. Again less attention is paid towards the health of women and girls in the villages.

(c) Use of outdated medicines in the dispensaries is quite normal. As the efficacy of the medicine is automatically reduced, people have again turned towards either quack doctors or towards superstitious practices.

There are certain voluntary agencies like Oxfam which are working in the same villages where we are working. But they have not yet taken up any programme for healthservices. Except making propaganda for family planning operations (on the same line as the Government propaganda) they have done nothing in the health sector. The only service they offered to the people during floods was to give loan on low interest rates to the affected people and the loan was repaid by the debtors after the harvest. The huge irrigation schemes began only after World Bank aid arrived since the Government had no funds to provide them under the five year plans. So boosting irrigiation. new

technology of HYV seeds in irrigated area, boosting production for cash crops mainly for export, development of infrastructure and absorbing non-farm population in service industry, creation of well-knit finance organisations and so on makes the entry of forces of imperialism in agriculture on a sound basis and allows the local exploiters, landlords and rich peasants, a share of the surplus. But has it really solved the problems of the people?

Nanded is a drought prone area. In the past five years it was twice declared drought area and twice the area was declared as being flood affected. Instead of giving water for subsistence crops, water is given mainly to cash crops. Due to faulty man-made forest policy, the pattern of rainfall is changing and affecting the crop production and ultimately the ecology. All drought-prone areas eradication schemes are slowly turned into implementing a policy for export led growth, cash crop growth. This is happening nationally, locally under the guidance of imperialism. "A major plank for ambitious political leaders is the promise of providing irrigation to newer areas. Here the chief consideration is bringing prosperity to those peasants who are in a position to grow cash crops and not tackling the droughts."

Though agricultural production of HYV has increased, we do not find any improvement in the conditions of poor people. All the benefits have gone to the upper classes. Consequently, economic conditions of the poor have further worsened This has made health of the poor people a severe problem. The vicious circle of poverty and health can be seen clearly in the rural area.

What imperialism does to the system is that it has made the system totally dependant. Future growth and internal growth of productive forces is stopped or growth is stagnated. In the case of health, it is clear that no funds are made available for further resources and production of medicines on specific disease or health problems. The less costly methods of production of medicines for such diseases are not found out. Ultimately, as agriaculture is very important to extract surplus, imperialist and multinationals do make high profits on the deteriorating conditions of health. And thus country's real wealth, the precious people, mainly working force, has again been ignored and is subjected to the process of pauperisation. From slums to farms, the fate is the same in this system.

Reference : The silent drought : Maharashtra, EPW, Jan 19, 1985.

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ORGANISING DOCTORS: TOWARDS WHAT END ?

anant phadke

Until the 'sixties almost all doctors in India belonged to the classical middle class, owning and controlling their instruments and cnoditions of production. But since the 'fifties more and more doctors are entering government service. The article begins with a discussion of the role of the wage earning doctor and suggests that the strategies for organising doctors should be based on a clear understanding of these contradictions.

This article was held over from the issue focussing on 'People in Health Care' (SHR II:2), due to lack of space. The author has since added a comment on Sujit Das's article in that issue which is published in the Dialogue section.

Analysis of role of doctors' organisations in social revolution in India, would require, to begin with, some analysis of doctors as a social layer (including an analysis of different subgroups of doctors) in India. This, in turn, would require an analysis of the role of doctors in the social process of production.

Materialist analysis of position of doctors

It is generally not recognised that although a doctor's work has its own peculiarities, it nevertheless involves a material process of production. Like the work of a barber or a massager, it brings about a material change in the human body and restores it to a 'normal' level. The 'raw material' on which doctors work is very peculiar — it is a material which thinks, has emotions and the emotional aspect is very much in action, when the body is impaired. This is especially true when the illness is serious. Hence the ideological-cultural relations that inevitably accompany any material process of production are much more pronounced in case of this material process of restoring an impaired body to a 'normal' level. The ideological role of doctors is, therefore, much more important than that of other professionals.

Until the sixties, almost all doctors in India belonged to the classical middle-class — owning and controlling their instruments (stethoscope, syringes... etc.) and conditions of production and not employing wage labour but basically living off one's own labour. The wealth amassed by this section of the middle-class has been through a commercial exploitation of consumers (patients) through professional monopoly over and mystification of medical science and technology; and not through the exploitation of wage-labour. Even now majority of doctors in India belong to this category of classical middle-class. But since late fifties, more and more doctors are entering into employment with the Government. This social layer is a wage-earner; does not own the instrument and conditions of its labour and apparently is part of the white-collar working class. But on closer examination, it would be clear that this layer's role in the process of social production of medical services is different from that of the working-class and that it belongs to the new middle-class — a peculiar product of developed capitalist society.

New middle class

The category — "new middle class" has been clearly formulated, developed in recent marxist literature. (For example, Carchedior, better, E. Wright) Briefly, the new middle class is a product of developed capitalism wherein a social layer occupies a position midway between the capitalist class and the working class by partly doing functions both of the capitalist class and of the working class. The "function of the collective worker" is geared to the production of use-values whereas that of capital is geared to the production of surplus value; (profit, rent, interest) and involves the work of supervision, surveilance. Wage earning doctors (medical officers) are on the one hand, part of the team of labourers consisting of nurses, midwives, technicians ...etc. doing materially useful work and like them not owning the instruments (medical equipment) and conditions (building and other infrastructure) of labour. On the other hand, they also perform the function of Capital, of supervising, extracting work from the paramedics. Their comparatively high salary, therefore, includes both a wage for the trained labour-power they sell and also part of the surplus value for performing the function of Capital. Along with foremen, executive engineers, head-clerks, junior officers and the ilk, departmental heads in educational institutions ..... this layer of doctors is part of the new middle

class. The junior doctors, a transitional phase in a doctor's life, is entrusted less with the function of Capital and hence is closer to the trained, skilled white collar working class The following analysis is applicable primarily to medical officers and only to a certain extent to the junior doctors.

This 'contradictory class location' of the Medical Officers would determine a great deal their contradictory role in the movement towards social revolution. As wage-earners, they are ready to unionise and fight for their demands, and this struggle demands an alliance with the rest of the working class against the state. But as officers, their interests demand a break from the subordinate working-class; a continuance of the hierarchy within the medical system.

There is a second couple of contradictory facets of medical officer's life — on the one hand, there is a need in this inhuman world of competition for amassing money, to earn more and more money through illegal, irrational private practice or through corruption to compete with and to be a part of the flock of the money-spinning community of fellow private practitioners. (This does not apply to the junior doctors. They do not do private practice.) On the other hand, as wage-earners, they need to accept limitations of a wage-earner, and are also expected to follow the ethics of a noble profession.

The third couple of contradictory aspects of this layer of wage-earning doctors is related to their ideological role. (In this respect, private practitioners also share this contradiction to a certain extent). On the one hand, the dominant ideology in the field of science and hence also in the field of medicine in capitalist society is that of technocratic scienticism i.e. of looking at health and disease as primarily a question of interplay of germs and chemicals amenable to drug-therapy. Added to this is a predominantly curative and individual-oriented as oppossed to community oriented approach to medical care. On the other hand, the very nature of the 'raw-material' on which the 'doctor-scientist' works demands a holistic, humane approach and an exposure (though in a limited and somewhat distorted fashion) to the science of community medicine; to the national health programmes, throws light on the limitations of a predominantly clinical orientation.

One more set of contradictory relations constitute the doctor's work — on the one hand, majority of doctors are drawn from upper-caste, urban background and are by and large male and hence are biased in favour of their own social background. On the other hand the science of medicine (though vitiated to a certain extent, by elitist, sexist bias) basically transcends these narrow barriers and exposes medicos to universal concepts devoid of narrow considerations.

What should be basis of doctor's organisation ?

The left has to grap these contradictions in order to determine its strategy of organising this layer of doctors. Secondly we should also be clear as to what kind of medical system we want to and can build in socialist India. Should we aim at a medical system which is in the process of freeing itself not only from commercialism of capitalism but also from other ills like hierarchy within medical system, mystification of medical knowledge and unnecessary glorification of medical profession, urbanism, elitism, sexism, allopathic chauvinism, scienticism... and so on? If yes, then in that case it s wrong to appeal medical officers mainly on the basis of their trade-union demands We should plainly point out their contradictory interests, and appeal them to choose, and stick to the positive, healthy, progressive aspects of their life-situation and organise a revolutionary union of doctors on the basis of this comprehensive plan. It is likely that only a small section of this new middle-class would come with us for this comprehensive revolutionary change in the medical system. That can not be helped. But to be sure, there is a definite objective basis for at least a small section to come over to the side of revolutionary programme.

Similarly, we need to concretely analyse the contradictory situation of other categories of doctors like private practitioners (classical upper middle class) junior doctors, consultants .. etc; and base our organizational strategy on that basis.

Unfortunately, today, there does not seem to be a well thought out strategy in organising doctors. On one had, medical Officers in Government service and resident doctors are being organized primarily on their trade-union demands. But things are not moving much beyond this narrow focus. At certain places, Left activists are the leading organizers of such organizations. They do get a few cadres for their party or group on the basis of Party's broader (non-medical) programme. Their medical programme however does not go much beyond asking for extension of medical services to all people. These Leftist organisers have not been able to foster a process of gathering medicos on the basis of a

comprehensive revolutionay medical programme which asks doctors to throw away their privileges as elite doctors in return for promise of decent, scientific, meaningful working life.

If there is a hope that doctors — a middle class — can be "neutralised" by catering to their trade union demands, then it is a misplaced hope; we must also understand that such a "neutralised' social layer would immediately spring into opposition if a thorough going change in medical system is proposed or is actually attempted. Radicalism of many leftist doctors is directed against injustice, irrationalities in the broader society; but has Penetrated only to a small extent in their own field, How can such a leadership foster a thorough-going change in the medical system ? A combination trade unionism in the medical field with broader left politics (but not inclusive of ills of the medical system enumerated above) will fall much short of revolutionary changes that can be made in the existing medical system. Some attempt in the right direction is being made in West Bengal during and after the state-wide strike in 1983. Apart from trade union demands they have asked for certain changes in the medical system, drug industry. It is difficult to judge from here, as to how much of their support for radical measures is a reflection of genuine change in the attitude of at least a sizeable number of doctors or only expresses the wish of a few leaders or worse, only a lip-service to radicalism in the medical field.

At the other end, many social activists criticise the doctors as if doctors ("barring a few exceptions") are basically anti-people. It is true that flourishing private practitioners, consultants, surgeons, hospital owners would, as a social layer be oppossed to a revolutionary change. But it is not realized by these critics that many wage-earning doctors have a lot of problems related to working conditions — they hardly have any say in the policy-decisions that affect their work, are constantly plagued by shortage of drug-supply and other facilities, have to cow down to the local bourgeois politicians, and at the same time are disliked, criticized by the people for 'poor service' for which many times they are not responsible. These woes, like those of workers in other public utility service, are genuine. Rather than ignoring their problems and be content only with criticizing their irrational, anti-people approach; why not analyse these problems and show them how they are problems of a system, how they can be eliminated only through a thoroughgoing revolutionary change in the medical system; (as part of a broad social revolution) and offer a programme, an organization which would help to do this? Many medical officers would not be interested in joining this organisation since they would not be prepared to leave many privileges that they currently enjoy. But why not build bridges across the valley that separates them from a people's front when there is some objective basis in their life situation? An approach which appeals doctors only on moralistic grounds is a mistaken one on many grounds and hence will not succeed in even rallying round even that small critical mass of doctors we need to forge in order to make any viable, sufficiently strong clamour for a revolutionary change in the medical sysrem.

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[Please see Dialogue Section]

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In Defence of My Confusion

Imrana Quadeer

I read with interest Anant Phadke and Dhruv Mankad's defence of their editorial policy. My confusion only doubled when I realised that for them a policy is meant only to be stated and not implemented. Within a given policy framework, should not an article be edited or published with comments requesting the author to rewrite it? Instead of declaring it "disjointed" etc., etc. six months after it was published and that too because some one else pointed out a few contradictions!

The basis of my "confusion" as Anant and Dhruv understand it, stands out clearly from their letter itself. *While I think that not all health analysts have the required understanding of society at large (including myself) and they should therefore very consciously try to do so through the 'window of health"* (a point in my letter with which my critics agree but have preferred to ignore), *they choose to believe that "a rigorous, correct understanding of Health and Medicine would not be possible with a superficial understanding of society".* This may be the ultimate truth but given the status of "rigorous and correct understanding" of the health analysts I am not ready to take such an assumption for granted. While they presume that within their perspective any discussion on health and medicine "would necessarily be based on an understanding of society in general", I will plead that such over-confidence only leads one into complacency. In fact I would like to point out that unless and until all authors of SHR are aware of the fact that all their general theories will be tested in the field of health (and vice versa) by the circle of SHR readers and not in the circles of Social Scientist or EPW readers, the tendency to take general concepts as well as the readers for granted cannot be checked. It is true that SHR has not got involved into a discussion on the mode of production or the nature of the state but it is also true that it has neither helped us understand these concepts through health nor clearly demonstrated the need to grasp them for a better understanding of the health situation. Do we, then, mention these concepts only to establish our Marxist credentials ?

Essentially the difference of opinions between us boils down to perspectives. For Anant and Dhruv there are those clear headed few who know what is "correct" and therefore have a monopoly over marxist analysis of health. They will write about imperialism in health in SHR and if at all necessary, improve their understanding of imperialism in other intellectual circles.

For me SHR is the place where through health I must understand imperialism. I will therefore not let superficial handing of the concept pass unnoticed in SHR.

All this of course is not to deny my confusion but to say that till the clear headed ones pay some attention to its roots it is bound to grow and grow more.

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One Sided Defence of Professional Interests

Anant Phadke

Sujit Das (SHR II : 2) starts from a correct observation that "...little study has been made to investigate analyse and understand the medical profession in the perspective of concrete reality." But his article does not help much in a critical analysis of doctors as a social layer but is an uncritical shame-faced defence of the interests of the doctors. Secondly, because of lack of clarity about the 'contradictory class location' of wage-earning doctors, he is unable to characterise them inspite of a long discussion (with many excursions into sub issues).

To begin with, a word about the title of the article. It reinforces the popular but mistaken notion of medical profession being only doctors, forgetting other medical professionals like nurses, social health workers and so on. The title reflects the perspective of the article of focussing on the interests of the doctors.

Das's defence of the interests of the doctors starts with his analysis of the general practitioners. It is true that this category of doctors is not involved in capitalist relations of 'production; but in petty commodity relations (not 'precapitalist mode of production') as part of a capitalist social formation. But it does not mean that he can not be an exploiter. Unlike retail store-keepers general practitioners have earned wealth quite out of proportion to their skill, knowledge and labour. Such doctors through their monopoly over medical knowledge and skills have earned money through commercial exploitation (price more than value). It is however, true that, as pointed out by Das, increased competition amongst doctors and the rise of state medical service is changing this picture especially in bigger towns and cities. Das is however, content with pointing out only the problems faced by GPS. This in itself does not tell us their possible role in social revolution and the attitude of marxists towards this layer. He does not mention their poor understanding of clinical or preventive medicine, their unnecessary use of injections to earn money, unnecessary use of drugs (rational or irrational combinations) many a times cursory, indifferent, attitude to patients, and so on. Likewise other contradictory aspects of their existence have to be brought out since it is these contradictions which tell us about the potentialities of change.

Confusion between two categories: Das clarifies that "the present discussion dwells largely on the doctor in-service among the practitioners of modern medicine". But doctors-in-service is not a homogenous category. Junior doctors are closer to the white collar working class, whereas the medical officers are part of the New Middle Class. Das is unable to see this distinction and therefo e discusses the 41 day strike by medical officers and engineers in West Bengal in 1974 and the movement of junior doctors in 1983 in the same breath, in the same section. Here again, he gives a one-sided picture which only defends the sectional interests of the doctors concerned. It does not give us an idea as to what would be the role of this layer of doctors in social revolution. The demands in the 1974-strike mentioned by Das were "exclusive executive power for the scientists, technologists and professionals in the scientific and technical departments of the state administration which were the preserve of the generalists and parity in pay-scale with the IAS". These are demands of a technocracy competing with administrative beauracracy! The most important issues in medical care like more resources for water and sanitation, proper training and importance to paramedics, rational drug policy, reorientation of medical education....these are not even mentioned by the 1974 strike. Then why does Das talk about the woes of these medical officers and give importance to this strike? This inability and unwillingness to focus on the contradictions of this section of doctors results in only defending the sectional interests of the New Middle Class. From the point of view of a social revolution, this is a fruitless exercise unless the most important issue of fundamental restructuring of health services are also taken up seriously (and not only for cosmetic purpose or for winning sympathy for a struggle basically aimed at sectional interests only).

In the junior doctors strike in 1983 however, the doctors' demand for proper facilities in the hospitals was also the people's need. Interests of doctors and the people coincided on one point. It is hoped that the movement of this section of the white collar working class would transcend more and more purely sectional interests. Only history can tell us whether the "basic people's demand" of the 1983 strike were genuinely raised or primarily to win public support for a movement for purely sectional interests. We would like to know from Das what efforts this organisation of junior doctors has made to pursue these people's demands during the last two years.

In this brief response, I would not go into Das's discussion on professionalism, role expetation, performance. One would only say that it suffers from the same one-sided, shamefaced defence of professional interests of doctors and their existing role.

Let us be clear about the role of the New Middle Class i.e medical officers (like most of the executive engineers, bank officers and others) in today's society, their contradictions and hence their role in social revolution. Even after a lengthy discussion, Das's article precisely fails in achieving this.

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A dawn rises in your dream,
but you go back to the longings of the coal.
Shovelling centuries back, you return
to the fiery springs
and the merry beasts of yore,
through the prehistoric dreams
of a sunlit village,
through the screaming skulls
of its grudging grandfathers

This earth lies unaware
of the acid and the dust
gathering the form of death
in your toil-torn lungs.
You shovel the coal, but
your naked children howl surprised
as the train passes by the hamlet

My brother, nameless, unknown,
Even you do not know
but for you the heart of Bihar,
its head raised like a seahorse's
stop to beat

Your mind is dry,
sterile like the River Damodar
in summer noons
The Buddha of Gaya ignores your prayers.

But tommorrow a sun will rise
from the flickering flame
of your charred heart,
you will find your forefather's dreams
in the single staring eye of the train, burning.

1974 INDIAN SKETCHES

Vol II No 4
MENTAL HEALTH

SOCIALIST HEALTH REVIEW

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Mental Health and Society

Nowadays, men often feel that their private lives are a series of traps. They sense that within their everyday worlds, they cannot overcome their troubles, and in this feeling, they are often quite correct: what ordinary men are directly aware of and what they try to do are bound by the private orbits in which they live; their visions and their powers are limited to the close-up scenes of job, family, neighbourhood; in other milieux, they move vicariously and remain spectators. And the more aware they become, however vaguely, of ambitions and of threats which transcend their immediate locales, the more trapped they seem to feel—C.Wright Mills in "The Sociological Imagination."

THIS is the condition of modern man. In order to understand mental health and illness it is very important to know the concept or nature of man within a given social milieu; for on this depends the definition of what is mental health and illness, the normal and the pathological. The human situation or human existence in a social milieu thus becomes the key to understanding mental health.

It is not necessary to go into the various conceptions held historically but it should suffice to state that the definition of mental health in a society is intimately related to the concept of human in that society. These conceptions are the result of the relations of production prevailing within a given society. They have a direct bearing on the human situation and determine mental health of individuals as well as classes. Marx described this aptly in the 'German Ideology': "The production of ideas, of conceptions, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life. Conceiving, thinking, the mental intercourse of men, appear at this stage as the direct afflux from their material behaviour. The same applies to mental production as expressed in the language of the politics, laws, morality, religion, metaphysics of a people. Men are the producers of their conceptions, ideas, etc. real, active men, as they are conditioned by the definite development of their productive forces and of the intercourse corresponding to these, upto its furthest forms. Consciousness can never be anything else than conscious existence, and the existence of men in their actual life-process." (Marx, 1956)

Thus, pathology stems from society itself and no amount of cure of an individual who manifests symptoms of being mentlaly ill, will provide a complete solution to this sickness. Mental helath is not a question "of the 'adjustment' of the individual to his society, but, on the contrary it (requires) the adjustment of society to the needs of man . . . whether or not the individual is healthy, is primarily not an individual matter but depends on the structure of his society. A healthy society furthers man's capacity to love his fellow men, to work creatively, to develop his reason and objectivity, to have a sense of self which is based on the experience of his own productive powers. An unhealthy society is one which creates mutual hostility, distrust, which transforms man into an instrument of use and exploitation for others, which deprives him of a sense of self, except inasmuch as he submits to others or becomes an automaton" (Fromm, 1956). It is therefore clear that the understanding of man's psyche "must be based on the analysis of man's needs stemming from the conditions of his existence" (ibid).

Historical Background

In the past mental illness was generally the equivalent of lunacy or madness but in post-industrial societies things are different. Understanding of mental health was earlier dichotomised into being mad or being sane. Now the situation has changed.

A change in the social formation cuts across the length and breadth of a social structure and leaves none untouched. The sphere of the human psyche too is affected. Traditional societies are close-knit and therefore have a greater capacity for absorption of distress, frustrations and conflicts that impinge upon individuals because of prevailing class-relations. Family, clan and community ties cushion members against them temporarily releasing them (individuals) from the traps of daily living.

With the industrial and French revolutions the old order received its death blow. Individuals, uprooted from their traditional ties, had to face new realities of changed production relations, but this time with little or no support from their family, clan or community. The new production relations under capitalism made alienation of man complete and mental health acquired additional dimensions. It was no longer confined to "madness" but smaller deviations from accepted norms became equally important, because a mass society that was emerging required stronger measures and mechanisms for social control if the status quo had to stay undisturbed.

The first break came during the "Paris Commune" when Philippe Pinel, a French physician, obtained permission of the commune to treat inmates of asylums with kindness and sympathy: instead of incurable lunatics they were now considered as "sick" persons who were in need of treatment rather than being evil and deserving punishment. Pinel's therapeutic intervention advocated a moral treatment—treating afflicted persons with care and concern and at the same time improving their environment; patients were taught the value of work, recreation, religion, social activities and self-control (Bockoven, 1963).

Thus for the first time the theory of unadjustment to society was put to practice and mental health henceforth became a matter of adjusting the unadjusted through a process of correction.

With further advancement of industrial society and strengthening of capitalism, issues of mental health were no longer confined to the lunatics, but increasingly neuroses began to acquire a central focus. This was thanks to the weakening of human ties and the process of alienation. Karl Marx described this as the negation of productivity in that man (the worker) can no longer "fulfill himself in his work but denies himself, has a feeling of misery rather than wellbeing, does not develop freely his mental and physical energies but is physically exhausted and mentally debased" (Marx, 1967). The man who has thus become subject to his alienated needs is "a mentally and physically dehumanized being . . . the self-conscious and self-acting commodity" (ibid).

Through Marx's writing it became clear that pathology resided not in the individual but within the social system itself. Mental illness originated in the pathological society and it was society that needed a total transformation; man's mental state depended upon the nature of the social system.

However, this explanation was set aside as it was a challenge that suggested the destruction of the existing system. Soon after Marx, Max Weber's verstehen approach came to the rescue of capitalism. Weber upturned Marx and provided a foundation for a new explanation to emerge about man's mentality. This new break was that by Sigmund Freud who directed attention to the intrapsychic life and emphasised the importance of the

unconscious. This psychology of the unconscious was indeed "revolutionary" and path-breaking because until Freud philosophers had always equated the mind with consciousness. Freud's now famous "ice-berg" theory revealed that "only a very small part of what is mental is conscious; the rest is unconscious made up of inadmissible and involuntary ideas which motivate behaviour" (Appignanesi and Zarate, 1979).

Sigmund Freud

"Where id was, there shall ego be" was Freud's way of describing mental health. Id is the unconscious, governed by the pleasure principle, and ego is the preconscious that emerges because of the reality principle. These ideas of the unconscious revolved around the oedipus complex which has generally acquired the expression 'father ... murder, mother ... incest'." In Freudism 'libido' plays the part of the mythical 'caloric' of eighteenth century health mechanics, or of the 'gravity' of Newtonian physics (Caudwell, 1971).

As a consequence, Freud's obsession with sexuality prevented him from using to advantage the contributions of Marx to the understanding of human behaviour.

Freud's sexual determinism is unrealistic. A child's desire for his mother's breast and subsequently for her love is not an incestuous response but that of hunger and emotional support; for the child it is the mother who provides social, economic and emotional security. Nor does the child see the father as a rival or, in his unconscious, desire to murder him. The father's role as a patriarch bestowed by society is interpreted by the child as a stranglehold on his freedom, creativity and object of security (the mother), and therefore in his unconscious he seeks to challenge it. A review of anthroplogical studies of matriarchal societies may indicate possibilities to further substantiate and support this critique of Freud's conception.

Freud's insight of the human psyche was based on an understanding of the individual, and as a consequence his interpretations of mental manifestations suffered severely. He did not see the individual's psyche in the context of the social milieu and therefore got trapped in the confines of the libido instinct.

Caudwell (1971) writes: "We must establish sociology (Marxist) before we can establish psychology, just as we must establish the laws of time and space before we can treat satisfactorily of a single particle . . ." This Freud has failed to see. To him all mental phenomena are simply the interaction and mutual distortion of the instincts, of which culture and social organisations are a projection, and yet this social environment, produced by the instincts, is just what tortures and inhibits the instincts.

However, Freud's influence on the various disciplines of the human psyche is still very substantial. Freud's contributions have greatly been responsible for the extensive attention that mental health receives, especially in western countries. It was largely due to the emergence of Freudian psychoanalysis that the mental health movement became popular in the USA. The professions of psychiatry and psychoanalysis subsequently acquired a new importance in the field of medicine—they became big business; a new technology developed around them—psychotropic drugs, psychosurgery, electrotherapy and the like. Until the late sixties, this individualistic approach to mental illness remained predominant.

Community Mental Health

At the turn of the seventies, by when the futility of the individualist approach was proved beyond doubt, things began to change. The community basis of mental health was recognised in the USA, but still the problem continued to be seen as one of adjustment and unadjustment to society. The difference was that it was not the individual that required to be adjusted, but the entire community in which he lived. Thus, if the mentally disturbed person came from a ghetto then psychiatric social workers and other paramedics were to be used for resocialisation of the immediate community of the mentally ill person; these paramedic workers thus became a new arsenal in the forces of social control.

It would be of interest to list out the characteristics of this community mental health movement (Bloom, 1973): a) emphasis on practice within the community rather than in institutional settings such as mental hospitals; b) effort to provide services and programmes directed at the total community rather than individual patients; c) prevention services given higher priority than therapeutic services; d) clinician offering indirect services—consultation, mental health education, training of community care givers (teachers, clergy, public health nurses, etc.)—rather than working directly with patients, thus reaching larger number of persons; e) innovative clinical strategies developed that more promptly meet the mental health needs of larger number of people (eg: crisis intervention) than was possible before; f) more rational basis for developing specific programmes, based upon a demographic analysis of the community being served, its unmet mental health needs, identification of those persons who are at special high risk for developing disordered behaviour; g) use of new personnel—para-professionals—to supplement services delivered by psychiatry, clinical psychology, psychiatric social work and psychiatric nursing; h) committment to "community control" dealing with community representatives in establishing programmes; and i) identifying sources of stress within the community and not simply within a sick person.

From the above listing it becomes clear that the community mental health movement is no different from the community health movement which aimed at developing resources in a decentralized manner (at the community level) so that through a new category of resource persons (such as paramedics, "voluntary" agencies or NGOs, etc.) the ruling class could strengthen mechanisms of social control, making them appear as self (or community) regulatory and democratic; thus, preserving the status quo. This fits in with the 'circulation of elite' framework of Vilfred Pareto which is regarded as a weapon of the ruling class (elites) to protect its own decadence "by introducing the idea of new 'social forces' among the masses" (Bottomore, 1966).

Dimensions of Mental Health

In spite of the understanding that the social structure of capitalism is in itself responsible for mental illness an overwhelming proportion of psychiatrists and psychoanalysts continue to treat mental illness as a primarily biological and behavioural problem. Therapeutic systems that have been evolved in recent years are therefore based on these assumptions and hence inadequate.

The problem of mental health, though having its own peculiarities, is no different from that of health in general or other social problems such as poverty, communalism, racism, sexism, arms race, etc. All these problems, both under capitalism and totalitarian socialism, are dealt with by society from the perspective of commanding social control. In the case of mental illness those afflicted, i.e. those not conforming to the norm, are subjected to degradation, segregation and isolation (in asylums) and more recently to incarceration, surgery, various chemical treatment procedures and inhuman psychological therapies, all directed towards driving home the point (to the patient as well as the population at large) that norms of society are sacred and unquestionable and must be followed at all cost.

Those whose behaviour is not accounted for by the rule-following model face not only the above stated consequences but are also labelled (eg: schizophrenic, hysterical, manic-depressive, catatonic) and stigmatised.

Erving Goffman calls this process 'mortification'. He writes (Goffman, 1984): "On admission to an asylum the 'patient' is stripped of his identity and any social support he enjoys. He begins with a series of abasements, degradations, humiliations and profanations of self. His self is systematically, if often unintentionally, mortified. The staff employs procedures on admission that complete this process of mortification—taking of life history, photographing, weighing, fingerprinting, assigning numbers, searching, listing personal possessions for storage, undressing, bathing, disinfecting, haircutting, issuing institutional clothing, instructing as to rules, and assigning to quarters."

Mental asylums are thus not very different from penal institutions having as their main function the correction of unadjusted behaviour; a process one may call resocialisation, which at times may go to the extent of disculturation (rendering temporary incapacity of managing normal day to day life processes when one gets out of the asylum).

It has been proved adequately that the therapeutic effects of currently practised psychotherapy "are small or non-existent and do not in any demonstrable way increase the rate of recovery over that of a comparable group which receives no treatment at all" (Eysenck, 1965). Thus, concludes John Ehrenreich that psychiatry "is the branch of medicine which openly specialises in the social control of deviant behaviour" (Ehrenreich, 1978); and Thomas Szasz adds, "therapeutic interventions have two faces; one is to heal the sick, the other is to control the wicked ... contemporary medical practices—in all countries regardless of their political make-up—often consist of complicated combinations of treatment and social control ... psychiatric diagnoses are stigmatizing labels, phrased to resemble medical diagnoses and applied to persons whose behaviour annoys or offends others" (Szasz, 1974).

Beyond the asylums, in daily life, such interventions are increasingly manifesting themselves, becauses problems which are essentially social are being further appropriated by the medical professions.

Mental illness is today generally classified into two categories—*psychoses* and *neuroses*. "What most patients of the first group suffer from is anxiety or depression, which if it exists in a mild form, may only be neurosis. When it reaches a severe stage, the person becomes totally abnormal. the opposite extreme of depression is excitement or elation; when depression and elation are manifest in a cycle, it is known as manic-depressive psychosis .. (Among neuroses) the commonest is the anxiety neurosis, followed by obsessional neurosis, the compulsive urge to wash your hands, a fetish for cleanliness, an abnormal concern about pollution. All the phobias too come under this classification" (Chakraborty, 1985).

In a survey conducted recently in Greater Calcutta it was found that 140 per 1000 persons suffer from some mental illness or the other. Neuroses affect one in ten of the population. The psychotic group is smaller, 16 per 1000 persons and half of these are acute cases, incapable of functioning socially; this is a very low figure in the international context, surprisingly so in a city like Calcutta where one expects more psychotic problems since the major factor, stress, is so overwhelmingly present (ibid).

Poverty and inhuman living conditions, especially in the third world, play a significant role in determining mental health. The working classes trapped in unfavourable work situations and unhygienic conditions are probably the worst off due to their alienated state. These cases of mental disturbances may not be recorded as neuroses or psychoses but the fact remains that their mental health is poor because even obtaining two square meals is a struggle: which means a lot of insecurity and mental trauma.

Minority communities and underprivileged castes in India, blacks in South Africa and a few western countries also live under a fear psychoses that adversely affects their mental well-being. Women as a group have historically faced and continue to experience mental trauma as a consequence of their placement in a patriarchal society. Males have throughout history enjoyed the privilege of double values whereas females have always been suppressed, their entire life-cycle being explained in terms of their uterus and sexual function, especially from the medical perspective (Ehrenreich and English, 1978). This results in differences of interpretation of the same qualities held by men and women. This is explained very well in a paper by Vibha Parthasarathi (quoted by Kalpana Sharma in the Indian Express Magazine, 27th October 1985). She writes that the quality of being "open" is interpreted as "flexible" for men and "fickle" for women; the quality of being "forthright" is interpreted as "frank" in the case of men and "rude" in women; "resoluteness" as "firm" for men and "rigid" for women; "unflinching" as "strong-willed" for men and "stubborn" for women; and so on. As a consequence these biased interpretations are in a large measure responsible for the neuroses or psychoses in women.

The modern world of advertising in capitalist societies and propaganda under both political systems promote values of the status quo, numbing creativity of the human species, inculcating a consumerism that drives man into becoming an automaton; he either becomes obsessed with the advertised or propagated norms and is labelled as an obedient or good citizen or he rejects these norms and is classified as a deviant, and if the deviance goes beyond the acceptable limits the person is labelled mentally ill, thus becoming a prey to the therapies of psychiatrists and psychoanalysts.

And finally patriarchy, which manifests itself through exploitative production relations, also contributes to mental pathology. Patriarchy, besides promoting sexism and suppressing women, promotes the idolatory of the clan, the race and the nation; it is in Freudian terms an incestuous fixation. It is manifested in our times in totalitarian regimes, bureaucratisation and monopoly control of productive forces, among other things. Fromm puts this point forcefully when he points out that "nationalism is our form of incest, is our idolatory, is our insanity; 'patriotism' is its cult" (Fromm, 1956). He furthers this argument by indicating the similarities between capitalism and totalitarian socialism. "Both systems are based on industrialisation, their goal is ever-increasing economic efficiency and wealth. They are societies run by a managerial class, and by professional politicians. They both are thoroughly materialistic in their outlook regardless of Christian ideology in the west and secular messianism in the east. They organise man in a centralised system, in large factories, political mass parties. Everybody is a cog in the machine, and has to function smoothly. In the west, this is achieved by methods of psychological conditioning, mass suggestions, monetary rewards. In the east by all this, plus the use of terror (or course, the west also uses terror—the 'spectre of Communism'). It is to be assumed that the more the Soviet system develops economically, the less severely will it have to exploit the majority of the population, hence the more can terror be replaced by methods of psychological manipulation. The west develops rapidly in the direction of Huxley's 'Brave New World', the east is today Orwell's '1984'. But both systems tend to converge" (ibid).

Conclusions

Medicalisation of human mental situation, the social control that goes with it, the alienation that class-relations generate

and the general drugging of the human mind through the modern information systems have made an obedient cog of him/her. Then, if the currently prevailing social formations are largely responsible for mental distress and frustrations, what does the common man look towards?

It is a difficult question to answer. Psychoanalysis, like psychiatry, has failed in its purpose. In the west, as well as east bloc nations, the former has become only an appendage of the latter—which is highly medicalised. In the underdeveloped countries, especially of Asia and Africa, both psychoanalysis and psychiatry have not found any significant roots, but in most of these countries traditional ties are still strong enough to provide comfort from the trappings of the social system.

Isn't this itself an indicator that a community-life that is *free* from exploitative class relations, patriarchy and a centralised and bureaucratised social control system will lead us towards a mentally and socially healthier life?

It has indeed been a difficult theme to compile. All the articles, except David Ingleby's which has been reproduced from a collection of the Radical Science Collective, are on psychiatry. We begin with Dilip Joshi's Psychiatry: State of the Art, which takes a look at present day psychiatry and its medicalisation.

Next we have Annie George's article which reviews the training programmes for medical and psychiatric social work and the role social workers play in psychotherapy. Psychoanalysis, that is extremely popular in west, is of little consequence (in practice) in our country—we present Ingleby's article that deals with ambivalence of psychoanalysis. This is followed by a short piece on a psychiatrist, Anand Nadkarni's experience in becoming one. We have two review articles, one on psychosurgery by Bindu Desai and the other on gender differences by Nalini. In addition we have a long non-theme article on experiences of a participatory research project on women and health by Gabriele Dietrich.

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Psychiatry: State of the Art

dilip joshi

Psychiatry, over the years, has been thoroughly medicalised—it views mental illness as a purely biological problem. The author presents a critique of the prevailing worldview of psychiatry and its practice. He argues in favour of a discounted alliance between psychiatry and medicine so that a more human psychiatry may be evolved.

MENTAL illness seems to be the major problem of our time. In the United States doctors write 200 million prescriptions each year for psychoactive drugs. Half to one million people are treated for 'schizophrenia'. In Britain, on the other hand, 25 per cent of all hospital beds are occupied by the mentally ill. One in nine men and one in six women can be expected to enter a mental institution in their lifetime (Ingleby 1980).

Psychotherapy—Current Perspectives, a book written by a group of psychotherapists, reveals an astounding scenario. The child consults a school-counsellor, mother of the child attends consciousness-raising groups for women, father attends 'T' sessions at factory and the grand-parents participate in a workshop conducted by a professional on 'pains of ageing'. Psychiatry today permeates and encompasses all significant events in human life. (Cottle and Whitten, 1980). On the other hand within psychiatry there is no consensus about:
(a) What are mental illnesses? (b) Who should treat them? (c) What are the means (how to?) and what are the ends? (What is cure?)

We have a vast amount of literature on mental illness compared to our inadequate understanding about it. Is there something fundamentally wrong? This article takes up these issues and examines them critically.

Mental Illness Not a Disease of the Body (Brain)

One is often told during training that 'schizophrenia' is a disease of body (brain) like diabetes, hypertension (high blood pressure). One is also told that we are ignorant about the cause of 'schizophrenia' but is it also not true of a bodily disease like cancer? 'Schizophrenia' is presented as a disease of body (brain) with a fixed cause which is being found out. One is reassured that with the advance in medical technology, psychiatry will be able to solve the riddle of 'schizophrenia'.

The present day trend in psychiatry is towards explaining mental illnesses as disorders of brain chemistry. It is speculated that tomorrow we will possess such powerful drugs to cure mental illnesses that psychiatry will not exist as a separate discipline but will be incorporated in clinical medicine and even general practitioners will be able to tackle these problems.

But let us look for evidence. Seymour S. Kety has done the most extensive work on 'Bio-chemistry of Schizophrenia'. He says that his work is inconclusive about 'schizophrenia' being a bodily illness (Avieti).

One does not deny that physical illnesses and drug-induced states produce a picture resembling mental illness. But Seiger, Osmond and Mann (1969) disagree about closeness of drug induced states with real illness. Dr. Joseph Berke argues that in 'schizophrenia' hallucinations are mainly auditory. While under the influence of psychedelic drugs people rarely have hallucinations of any kind. Most of the experiences of false perceptions (illusions) are visual in nature (Berke).

One of the main theories about 'schizophrenia' is the dopamine theory. It states that the specific behavioural symptoms are produced by excess of dopamine in the brain (Kaplan and Saddock, 1980). If one finds that an abnormal behaviour (inability to work consistently, inability to relate to people, etc.) or an abnormal experience (inability to experience pleasure, feeling that whole world is against you, etc.) is accompanied by a change in body chemistry (excess of dopamine in brain) one cannot conclude that excess of dopamine is the cause of this behaviour or experience because:
(a) One considers excess of dopamine as abnormal only because one took the behaviour or experience as abnormal in the first place.
(b) One is correlating an entity in the natural domain (excess of dopamine) with a phenomenon in experimental domain which one cannot correlate scientifically.
(c) The excess of dopamine can be subsequent to the experience.

Let us further clarify the difference between a physical illness and a mental illness by taking the example of hypertension and 'schizophrenia'.

When as a doctor I find that the blood pressure of the person sitting next to me is more than 120 over 80 millimeters of mercury, I tell him that he is suffering from hypertension. Whatever my values, my beliefs they do not influence what I see or observe, hypertension remaining a similar entity all over the world.

On the other hand when a psychiatrist makes a diagnosis of 'schizophrenia' he is judging the behaviour or experience of the person sitting next to him according to certain prevalent (cultural) beliefs about human nature and what he sees is influenced by what he believes.

The findings of United States-United Kingdom Joint Schizophrenia project reveal that American psychiatrists tend to diagnose 'schizophrenia' much more frequently than their British counterparts. For a similar case an American psychiatrist will diagnose the person as 'schizophrenic' while the Britisher would not (ibid).

Objectivity of Diagnosis in Psychiatry

"The diagnosis of schizophrenia should rest on whether a normal person understands the person concerned's behaviour"—Manfred Bleuler, a leading psychiatrist (Laing, 1982).

So how are psychiatrists different from lay people? A lay person also understands that a person is behaving in an unorthodox way, the psychiatrists call it 'schizophrenia'. But what have they gained in the process? Has calling the person 'schizophrenic' rendered his situation, his response, more intelligible? No. One feels that the exercise of diagnosis is for screening normal, good, conforming behaviour or experience from an abnormal, bad, nonconforming one; rather than to really understand the *genesis* of that behaviour or experience. This distinction is made by the psychiatrist on the basis of certain prevalent beliefs about human nature and hence in the psychiatric interview a fact never remains a fact, it already becomes an interpretation, a value judgement (Goldmann).

A-priori Assumptions About Human Nature in Psychiatry

These assumptions are based on an image of the human being as a sociable, non-violent, hardworking, rationally profit making organism. These assumptions are revealed when one sits in the psychiatry out-patient department and makes a list of most

frequently asked questions. These questions are:
(a) whether the person works regularly? (b) whether he/she mixes with others? (c) if in business, is there adequate profit making? (d) whether he/she is violent towards self or others? (Thines)

This human nature is supposed to be all pervasive and universal, according to the psychiatrist. But let us look around, let us go into the past to find out whether this is true.

Can one say that human nature is essentially peace loving, non-violent when one looks back at Nazi concentration camps, the bombing of Hiroshima and Nagasaki? Where is the sociable human nature when two communities exist side by side in the world with evergrowing paranoia about each other?

Can one find a hardworking human being amongst those few who rule the world today and enjoy at the cost of toiling masses? Isn't the wealth of many European countries smeared with sweat and blood of the colonised people?

Man is yet to be born. On the totality of images that we create by our praxis in the world depends the future image of man. As of today, this is a period of inhuman exploitation of men and women and a narrative of violence to maintain and perpetuate that oppression. It is surprising then that those who are most frequently diagnosed as mentally ill belong to the category of defenceless (poor, children, women, aged) or those whom the middle-class, superior caste/race psychiatrist cannot understand—the ethnic minorities, people who live on fringes of cities. Half a million children in the United States receive treatment with powerful psychoactive drugs for being 'hyperkinetic' (Ingleby, 1980). The incidence of 'schizophrenia' is more in the lower socio-economic strata (Lidz).

Practice of Psychiatry

"Cure is accomplished when the former person becomes an obedient robot moving around either in the chronic backwards of mental institution or without any human sense in the outside society . . ." (Cooper, 1974).

Antonin Artaud, a great poet, wrote with anguish after being given electroshocks in a hospital at Rodez "I died at Rodez under electroshocks. I say dead, legally and medically dead" (Greene).

Ernst Hemingway describing his experience of shocks to his friend said, "it was a brilliant cure, but we lost the patient. It killed both my soul as well as my mind." He committed suicide a few months later (Madness Network News, Fall 1984). A violonist who was given shocks for depression in a Glasgow hospital, could not later on give her performance as she lost her violin repertoire (Laing, 1976). Most of the groups working for a ban on electroshocks in different countries of the world claim that not only do shocks cause memory loss, disorientation wild excitement or terror, but shocks can also kill. Shock is not only a procedure wherein electric current is passed through the brain of a person but also the dehumanising ritual of being forcibly held by people, being forced to lie down, etc. which a person has to go through. Why are people not told about the after-effects of shocks? Why are they not told about the procedure? I am sure if the procedure is described to the person, he will never like to undergo such a dehumanizing experience. Shocks are either mystified—'Its only an injection', 'You will be cured', or they are offered as an alternative to long term hospitalisation. In a similar situation a group of prisoners agreed to participate in an experiment which they knew would damage their health, so as to get their prison stay reduced.

Dr Caligari's *Psychiatric Drugs*, a book published from Berkeley, informs us that psychiatric pills neither tranquillise nor elevate our mood, they actually deaden our feelings and our bodies. Drugs like thovagine, steliazine, nlehavil, haldot (all anti-

Towards a Human Psychiatry

Present day psychiatry considers the person as a passive object, who reacts in a determinate way to his situation. It shows complete disregard for human subjectivity. Between our interiorisation of exteriority (family, class experience) and our re-exteriorisation of this interiority, i.e. in the passage from exteriority to exteriority (objective to objective) there is a moment of human subjectivity. We do not necessarily reproduce in the same exact fashion the exteriority which we interiorise. In other words we can always make something of what is made of us. This is the realm of human freedom. This is ignored in the constitution of the person as passive object.

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psychotics), tofanil, elavil (antidepressants) have a damaging effect on the brain.

Tandive dyskinesia is a syndrome charecterised by involuntary movements of tongue, face, neck, developing after long term antipsychotic medication. It is difficult to cure. The addiction potential of diazepam (valium, calmpose) is also mentioned in the book. A separate chapter instructs the readers on how to safely and gradually withdraw from psychiatric pills. But people coming to psychiatry departments are hardly told about the after effects of pills. Why?

Critique of Medicalised Psychiatry

In his postscript to 'Discussion of Lay Analysis' Sigmund Freud emphasised that psychoanalysis is not a branch of medicine but comes under the head of psychology and the training for psychoanalysis differs from that imparted to physicians. More important than whether the trainee is a medical graduate or not, is the specialised training for psychoanalysis. He also stressed that the trainee will have not only to study psychology but also sociology, history of civilisation, Darwin's theory of evolution, etc. But has psychiatry paid any heed to Freud's advice? No. Even to pay heed to it, it will have to read, remember his work and not repress it.

Today the alliance between psychiatry and medicine is complete with incorporation of psychiatry into general hospitals. Those who train in psychiatry are medical graduates who take up psychiatry as a postgraduate discipline, while in his days Freud defended 'lay analysis' (McGuire).

The present day psychiatry is medicalised psychiatry with its belief that mental illnesses are due to disorders of brain chemistry, with its emphasis on diagnosis and classification (labelling) and its promise of instant cures with pills and shocks.

By proclaiming that mental illness is a physical illness, it situates the problem inter-individually, allowing family and society to wash its hands of the person and hence it remains essentially status-quoist. By giving more emphasis on diagnosis and classification than understanding, intelligibility, which requires empathy, it is basically screening people who cannot fulfil the expectations the society has of them, on behalf of the ruling class.

By its reliance on pills and shocks it ends up by medicalising human problems and hence psychiatric therapy has on the contrary damaging effects.

For lay people psychiatrists wearing white coats, dispensing medicines appear scientific, objective. But if there is no consensus on fundamental issues in psychiatry, if there is more emphasis on labelling than understanding, and if the therapy is arbitrary and damaging, any amount of scientificity that psychiatry will try to bring in from outside, from its white coats, its pills, its sophisticated research on the body of 'schizophrenics', its alliance with medicine, will be futile.

On the other hand the present day psychiatry believes that the psychiatrist is a passive observer. He does not influence the situation, he does not see what he wants to see. By constituting the person as an object, an ensemble of physico-chemical entities, which is only worth effort of labelling and classifying, the psychiatrist remains totally external to the lived experience of mental illness.

Mental illness is nothing but a response of the person to his situation. We will be able to comprehend it only when we grasp the situation to which it is the response. It is also essential to understand the lived experience of mental illness with the help of mediations like family and class.

Instead of being a discipline which of necessity must give respect to the dignity and freedom of the individual, present day psychiatry is repressive. It should be our common endeavour to reinstate this respect for human dignity and freedom in psychiatry so that it will really be a human psychiatry.

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We regret to announce that despite all our efforts we have not been able to register the publication under the name Socialist Health Review. We have been allowed the use of **RADICAL JOURNAL OF HEALTH**, which incidentally was our last choice! The issue of June 1986, Vol III number 1 of SHR will appear as **RADICAL JOURNAL OF HEALTH**. Please note that the objectives and purpose of the journal and therefore the choice of content, will remain the same.

The Helping Profession: Is It Really Helpful?

annie george

The role of medical and psychiatric social work in dealing with the mentally ill has been considerably enhanced due to the community mental health movement. What is the role of the social worker? How adequately are they trained for handling their task? In this article the author, herself a trained social worker, addresses these questions and presents a critique of psychiatric social work programmes as they exist today in the context of the Indian situation.

IT is generally accepted today that the causative factors for mental ill health are multifarious and interlinked and so their handling on many fronts—curative, preventive and promotive—is done by a multidisciplinary team. Traditionally, and till today, mental ill health has been seen as an illness in a clinical sense, and so the doctor is the person with whom the mentally ill person comes in contact for treatment. But increasingly, and cardinally, through the influence of developments in this field in the west, other professions have been roped into the field of mental health. Psychiatric social work is one such profession.

Who is helped through the intervention of social work, the "helping" profession, in the field of mental health? What were the roles assigned to it historically, and how have they changed to fit the mental health situation in India today?

Evolution and Contributions of Psychiatric Social Work

The concept of what constitutes mental health and ill health has always varied, and with it has changed the role of the social worker. The western practice upto late 19th century was to segregate the mentally ill persons in asylums, away from the mainstream of society. Since such persons were considered incurable, no psychiatric attention was given to them; social work intervention was also non-existent. By the end of the 19th century the understanding of mental illness in western society had changed considerably: mentally ill persons were now considered "sick" and various physical and psychological therapies were tried on them. The underlying assumption of such an approach was that people became mentally ill because of their inability to adjust to the pace and demand of urban industrialised life. Various theories citing psychological factors intrinsic in the "sick" individuals were put forward as the cause of their maladjustment; but whatever the understanding and the line of treatment, the end goal of the process was definite—the mentally ill person had to be treated such that he/she would be able to adjust back to society.

In the practical application of this conceptual framework there was tremendous scope for social work. Medical and psychiatric social work emerged in the USA and Great Britain in late 19th century because doctors there felt the need for a person who would supplement the service of medical care provided through hospitals. Social workers were used by them to get a more complete picture of the patient's background by providing psycho-social data about the patient. In India psychiatric social work started because Indian doctors had gone abroad and had seen psychiatric social workers and wanted them to act as "acolyte" to the high priest, the doctor. (Marulasiddaiah and Sharriff, 1981).

Right through the sixties, in the west, the treatment of the mentally ill was predominantly individualistic, institution-based and curative; this is the approach which is prevalent in India today. The role of the social worker was to understand the behaviour of people when they are (mentally) ill, the potentialities within individuals and their families, the resources in the community, the environmental effects associated with the disease, creation of insight into their problems, to bring out a social diagnosis and to suggest means of treatment together with physical and other psychological methods which would help them *revive their strengths and become active citizens* (emphasis mine) (Marulasiddaiah and Sharriff, 1981). In other words the social worker used all possible means and resources to help the person adjust to the very conditions which caused the problem. Through experience, social workers realised that other social groups to which the mentally ill person belonged, like the family and the work group, could also be used in the process of getting the person readjusted. Thus emerged treatment methods like family centered therapy and milieu therapy.

By the seventies there was a growing disillusionment with the person-centered, curative approach. Individual care in helping the mentally ill person to adjust was time consuming, expensive, and its results were seen only after a long period of intervention. Community based mental health services were seen as an alternative. In this approach like the earlier individual-centered one, the basic understanding of mental health had not changed; the contributions of social conditions—growing alienation, pressures of urban competitive life, erosion of traditional community support systems—to mental ill health were not acknowledged. Mentally ill persons, those who deviated from the norms determined by society, still had to be adjusted to fit into that society. The difference was that the adjustment would start with the community, would focus on preventive measures and would reach out to more people by training people from the community as frontline mental health workers. For the social worker the essential difference was that instead of treating the individual as an unit of work, the community became the work unit. Her major role would now be to provide psycho-social data about the community, and to plan programmes to prevent mental illness, programmes which includes recreation facilities for adolescents, family life education, and so on. Since the community health movement has not gained much ground in India, there are not many community based mental health programmes. Activities like organised recreation activities for children, fun fairs and sports days which are organised by social work agencies for disadvantaged groups usually go under the garb of community mental health programmes. These programmes may temporarily divert the attention of the people from their problems of daily living but they do nothing to alleviate them.

Though the role of the psychiatric social worker has changed through various approaches to the treatment of mental ill health, her contribution to society has remained the same: to identify mentally ill persons, to treat them in a congenial manner through social work techniques, to resocialise the person to the requirements of society, and if such resocialisation is not possible, to segregate the person from society so that other normal people are not disturbed in their daily functioning. In fact, the social control aspects of the job generally remain in the background, and what emerges for the mentally ill person and the public at large to behold is a gentle, caring woman (psychiatric social worker) whose entire function is to be at their service and to look after their problems. Most medical and psychiatric social workers are women; other specialisations of social work like community development or criminology are considered the male domain. Medical and psychiatric social work

is probably seen by most people as an extension of the traditional role assigned to women as the caretakers of the sick and helpless members of the family. Moreover, traditionally, the woman bears the responsibility of socialising the child and psychiatric social workers, as an extension of this traditional role, resocialise the mentally ill person who has lost the social skills which are necessary to survive in an industrial, competitive world. Thus through their legitimately assigned task of labelling (diagnosis), treating and/or confining persons with deviant behaviour, the psychiatric social workers perform a subtle and sophisticated form of social control. Her efforts to identify and change the stress inducing elements inherent in the way society has been organised are negligible. The present day social work education programmes are partly responsible for this state of affairs.

Psychiatric Social Work Training Programmes

Entrants to the field of psychiatric social work are trained for the profession through a two year course, generally conducted at the post-graduate level. Some schools of social work in India offer specialised training in medical/psychiatric social work. At such schools, in the first year students are taught basic courses in the methods of social work, human behaviour, man and society, and some electives. It is in the second year generally that courses related to the specialisation are taught. These usually include courses on psychiatric information for social workers, courses on methods of social work used by psychiatric social workers—mainly casework, or working with an individual and his family—and concepts from different schools of thought, like Freud, Rank and Parsons which have practical use in casework. Much of the theoretical base and action of medical and psychiatric social work is derived from Talcott Parsons' model of the sick role, in which, sociologically, illness was seen as a form of social deviance where an individual adopts a specific role. The sick role was characterised by the patient's temporary exemption from social responsibilities, and freedom from blame for being sick. However, since the role was considered undesirable and socially not approved, the sick person was expected to seek professional help to get well, and to comply with the treatment prescribed by the medical personnel. Though Parsons' model of the sick role provides the basis of work for the psychiatric social worker, in terms of treating mentally ill persons and getting them back to perform their socially defined roles, it also is a legitimisation of the power of mental health personnel over mentally ill persons who have to comply with the treatment of the professionals in order to have the label of social deviant removed. In the theoretical part of the training most emphasis is given to casework than on any other method of social work. In casework the focus of content is on various theories which explain human behaviour and which therefore help the psychiatric social worker understand, arrive at a social diagnosis and plan out the treatment of mentally ill clients. Thus these courses tend to stress psychiatric analysis of individual problems rather than skills in dealing with the core of the problem situation itself. They are also institution centres and stress the remedial aspects in mental health (Miranda, 1985). At the level of theoretical training mental health is not seen in its wider sense with contributions from other courses on social work methods. Specialisation courses are so compartmentalised that students of psychiatric social work generally cannot take courses offered by other specialisations like community development or family welfare, even though the information content of these courses may be very relevant for the psychiatric social work student to develop a holistic understanding of her field of training.

Field work is the practical component in the training to become a psychiatric social worker. Field work experience, in which the student is attached to various social work agencies for two or three days per week for the entire period of the training, is largely limited to institutional urban settings like child guidance clinics, mental health day care centres, and psychiatric departments in wards of urban hospitals. Here the student gains maximum experience in casework or in working with individuals who are diagnosed as mentally sick. Any experience in community mental health is usually unplanned and incidental. It is expected that when students become practitioners they will be able to transfer their skills to other settings. This never really happens. In field work students spend more time learning about the "what" and the "how" in field work tasks than in engaging in the "why" or analytical and conceptual learning (Miranda, 1985). Hence, students are more bothered about what are the symptoms and how to counsel a mentally ill person than in understanding why he has been labelled as sick, and what were the forces in his immediate and extended environment which caused him to behave in a different way than is normally expected.

Field work is critical learning experience for the social work student because this is the period when her concepts about the practice of the profession are being formed, based on her practical experiences; she is also trying to work out her professional role as a social worker. Relating theory to practice becomes the major learning activity in field work. When theory and practice focus exclusively on the mentally-ill person and on his treatment so as to get him resocialised and readjusted to the demands of society, it is inevitable that by the end of the training period the student social worker has equated working on treatment and rehabilitation of mentally ill persons as the main role assigned to her. She in turn becomes a practitioner and carries on this tradition.

Relevance of Training

Observing the practice of psychiatric social work today, it would appear that the effectiveness of the training is limited to the time tested casework method. However, as Desai (1981) says, the effectiveness of a profession depends on the quality of preparation of the practitioners. The objectives of the curriculum in social work training are to prepare the type and quality of manpower capable of performing tasks and functions which ultimately achieve the goal the profession has set for itself in the context of the society in which it seeks to serve. Desai analyses and lists the social realities of India as poverty, population and its interface with problems of housing, water supply, sanitation, accessibility to services; unemployment, disability resulting from social and economic inequity, and the exploitation of the vulnerable and weaker sections of society. Constant coping with these problems could lead to a breakdown in an individual's mental health functioning. Therefore the tasks of the (psychiatric) social worker would be to identify policies and socio-economic structures which are exploitative of the majority and which are not designed to achieve social goals for all. A second major role would be to develop and/or modify services and/or institutional structures for educating people to recognise their inherent capacity for action. By and large psychiatric social workers do not perform these roles because neither at the training level nor at the practice level has it been consciously realised and acknowledged that it is these societal problems of daily living which are contributing to the mental ill health situation in India.

The present day training programmes do not address these tasks. The training curricula are basically borrowed from the west, mainly the USA. They aim at helping people adjust to an urban, industrial and metropolis dominated social milieu—because Indian social scientists accept the western model of

development for the elimination of poverty. Social work was established to help the deviants of the system to adjust to it and to provide remedial services to those who are victims of new social systems (Desai, 1981).

The training and practical efforts of psychiatric social work is relevant; to whom it is so is the question. If serving the needs of the majority of the population in order to bring them into the mainstream of development is the goal of social work, then the training for psychiatric social work, particularly the knowledge about what constitutes mental health and mental ill health, the skills in treating mentally ill persons based on the understanding of what constitutes mental health, and the values embedded in such an interpretation are not relevant to the majority of the people, not even particularly to the mentally ill. Social workers have not been able, in any significant way, to work out strategies to deal with the daily problems of living of the majority—problems which take their toll in terms of familial tensions, and mental ill health. What the professions involved in mental health have successfully done is to medicalise social problems, to make it appear that problems stemming from social causes are actually due to individual deviance, solvable or at least controllable by the individual's doctor (and others involved in the therapeutic process) (Ehreinreich, 1978). Psychiatric social work, in this sense, is very relevant to the powers that be; through the semblance of a profession based on scientific knowledge, which helps deviant people adjust, it ensures that the way society is presently organised is maintained.

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UN List of Banned Products

LAST June, the UN decided to delete all trade information from future editions of the "UN Consolidated List of Banned and Severely Restricted Products", an international directory of trade and regulatory data on over 500 products contributed by 60 countries. Just this week, the UN announced its intention to reverse that decision. The reversal came after months of lengthy debates on the issue within the UN in a highly politicised atmosphere. Ultimately, reason pre-vailed over pure politics and the public interest perspective—including trade data—emerged as the only rational solution to the debate. The 1986 edition will include trade data and the unique trade name index for pesticide and pharmaceutical products.

Hundreds of very thoughtful letters from the NGO community were in a large part responsible for allowing the debate to occur at all and for eventually helping to turn the decision in the direction of including trade data. While opposition to the mere existence of the 'List' has clearly diminished over the past several years, it has not disappeared. At the present, claims are being made that the 'List' is not really useful to governments, but is only a duplication of other efforts at information sharing laready in place in other UN agencies.

The United Nations is currently preparing its report on the Consolidated List Project for the Economic and Social Council (ECOSOC) meetings to be held in July. The office preparing the report would like to include examples of instances where the List has been useful to governments. The UN has recently written letters to countries in order to collect that information from them.

NGOs could be helpful in supporting the UN effort to collect data on the List's usefulness in a number of ways:

1 Encourage your government to reply to the UN's request for information. The UN has sent requests for information on the 'Lists' usefulness to World Health Organisation correspondents, United Nations Environment Programme correspondents, and the United Nations Development Programme's Resident Representative in all countries, and have asked those Reps to contact government officials for that type of informaton.

2 Contribute your own examples of how your organisation has used the List to bring about positive changes in laws or practices in your country. Brazilian groups, for instance, have used the UN Consolidated List in their efforts to persuade their government to severely restrict certain very dangerous pesticide products. A British organisation has reported that it has found the List very useful in its work with the United Kingdom's Food and Environmental Protection bill.

If you do send data on positive contributions of the 'List', please try to make your descriptions as specific and as well documented as possible. For example, it would be helpful to include the date of any legal or administrative action taken and a copy of the actual taxt of the law with your description of the action. If it is impossible for you to collect background documents, but you know of an action that has been taken as a result of the UN 'List', please report it anyway. Background can be collected later, if needed. All information must be received by May 15, 1986, it is to be included in the UN's format report for the Economic and Social Council. The UN address is: Assistant Secretary General, United Nations, DIESA-PPCO, 18th floor, New York, New York 10017; USA. Also, please send a copy of all correspondence to us for our information.

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The Ambivalence of Psychoanalysis

david ingleby

Almost since the beginning of the century, psychoanalysis has sat like an undigested meal in the collective stomach. Unable finally either to assimilate or eliminate it writers have endlessly churned over its merits and demerits. The list of books on psychoanalysis which are offered to the public year after year never ceases to amaze. For, as well as being one of the most daring and radical ideas ever put forward, psychoanalysis is also part of a deadening and conformist apparatus. This paradox, which underlies the permanently troubled relationship between psychoanalysis and the Left is the subject of the article, condensed from "Psychoanalysis Groups Politics Culture" edited by the Radical Science Collective Free Association, 1984.

The Essential Ambivalence

WITHOUT doubt it is the ambiguous political message of psychoanalysis which has kept the discussion open so long. If it were possible to classify it once and for all as 'progressive' or 'reactionary', the issue would long since have been dropped. Writing a political character reference for psychoanalysis is no easy matter. So deep are the contradictions involved that one comes to mistrust anybody who has arrived at a simple conclusion 'for' or 'against'.

The political arguments against are well known. As a therapy, psychoanalysis can be authoritarian to the point of 'brainwashing' its patients; and concerned both with 'inner' factors to the exclusion of 'outer' ones, and with adjusting the individual to the *status quo*, rather than society to its inhabitants. As a theory, it is reductionistic, ignoring social factors and obscuring political tensions, and embodies many conservative and socially pessimistic assumptions. When this theory becomes disseminated as a popular world-view, we are in the grip of an ideology which stifles political action even before it can be expressed.

Yet as often as it is vilified, psychoanalysis is redeemed by leftist (and feminist) enthusiasts who come to its rescue. In the Frankfurt School tradition, it offers, first, a critique of the collective psychoanalysis which makes capitalism tick (Reich, Adorno, Marcuse); and, second, a mode of analysis—'critical self-reflection'—which provides a paradigm for 'emancipatory' thought (Habermas). In French structuralism (Lacan, Althusser), it decentres human subjectivity away from the Cartesian ego, in a paradigm shift as radical as that achieved by Copernicus four centuries before. For those seeking to give content to the slogan, 'the personal is political', it reaches beneath the banality of everyday consciousness to grasp the processes which underly the power-structure of relationships. Lacking any serious competitors on this terrain, psychoanalysis is likely to survive any denunciation its critics heap upon it.

We are not likely to find which side psychoanalysis is 'really' on by scrutiny of Freud's own political views. Aside from the fact that quotations can be dredged from his writings which show him in any light one pleases, the assumption on which such a search is based is a faulty one; there may be little correspondence between an individual's conscious attitudes to society and the message which speaks through their writings and actions.

The truth is, as I shall attempt to show in this essay, that the political character of psychoanalysis is *inherently* ambivalent; this is due, not only to the fact that different readings of it can be produced which argue in different directions, but also to certain contradictions built into its practice and theory.

Psychoanalysis As Therapy

The strongest criticisms of psychoanalysis as a set of practices arise from the fact that these practices are part of a system, labelled by Kovel (1980) the 'mental health industry', which basically exists because of its effectiveness in maintaining social order. Psychoanalysis shares with other types of 'mental welfare' concern to adapt or adjust individuals to their allotted place in society, by reference to an hypostasised set of norms of 'mature' human behaviour. Like them, it 'blames the victim' for his or her breakdown, leaving unscathed the larger social framework within which breakdowns occur. Seeing itself as a technology, it dehumanises its patients by submitting them to a rigid set of rules and modes of understanding; it infantilises them, the better to be able to control their development.

The same criticisms can be made of virtually any other aspect of the mental welfare system. It is a convenient oversimplification to say that this is because the system is based on psychoanalysis; in reality, the system is formed out of many different theories and practices, and what is visible of psychoanalysis within it is only the lowest common denominator which it shares with these other approaches. Berger (1955) may be right in claiming that, if Freud had not existed, American society would have had to invent him, but what this means in fact is that the success of psychoanalysis within the mental health system was (to use a favourite term of Freud's) overdetermined. Some of the determinants had little to do with Freud, and much more with the demands of the system.

That system, to a large extent, can be identified with psychiatry, but we must not overlook the dialectical change which psychiatry and psychoanalysis wrought upon each other. Unfortunately, most of the political critiques of psychiatry are focussed on precisely those parts of it which resisted this transformation; anti-psychiatry, and accounts of 'the medicalisation of deviance', have as their point of departure State-run, asylum-based, and physically oriented methods of treatment. Psychoanalysis, on the other hand, normally takes place with a private contractual relationship between client and professional; it is seldom institutional; and its method is purely verbal. Moreover, far from being something that can be imposed on people, it in fact demands from them a level of motivation which leaves many patients emotionally and financially exhausted. The continuity with nineteenth-century asylum psychiatry is an illusion; in reality, psychoanalysis resolved a profound crisis in mental welfare, by providing the *savoir* for new forms of intervention aimed at the population *outside* the asylum. Freud, of course, was not a psychiatrist but a neurologist, and from his out-patient practice he brought into psychiatry a method of dissecting everyday lives which the asylum doctors, with their largely cadaverous population of subjects, could never have developed.

A critique which can encompass psychoanalytic practice has to take as its starting-point a whole system for the management and surveillance of social life, the 'psy complex', of which traditional psychiatry forms only the backstop. The psy complex is an ensemble of agencies, including clinical, educational, developmental and industrial psychology, psychotherapy, and social work, whose discourses are not confined to particular sites of professional intervention, but which traverse the family, school

and work-place—indeed, 'the social' itself. The most effective ways of analysing this system have come not from anti-psychiatry, but from the 'post-structuralist' writers surrounding Foucault: Castel, Donzelot, Deleuze and Guattari.

Apart from the fact that these writers adopt a much broader definition of the mental health system than the anti-psychiatrists did, they diverge from the latter on three fundamental issues. The first concerns the relation between professionals and the State: whereas anti-psychiatry saw the former as agents of the latter – a kind of mental police force — writers on the psy complex emphasise its disorganised nature and its tendency to create its own goals. The second difference concerns the nature of the power exercised: for anti-psychiatry, this was essentially repressive, being concerned to stop people doing things they weren't supposed to. Post-structuralists, however, stress 'productive power' – the dissemination of discourses among a receptive population, discourses which shape and structure new forms of subjectivity. Lastly, whereas, for anti-psychiatry, the medical model and positivism played key roles in the legitimation of psychiatric interventions, the post-structuralists treat with contempt the notion of ideology and ideology-critique.

At least on the first two points, the post-structuralists' approach to the psy complex seems far more relevant for understanding psychoanalysis. (This is hardly surprising, for these authors to a great extent approached the subject by way of psychoanalysis.) For them, the growth of interventions in mental welfare has to be seen in the context of a gradual transfer of power from the family to other agencies.

With the decline of patriarchal power under capitalism, many of the traditional functions of the family in controlling and caring for individuals could no longer be exercised. The welfare state came into being through the piecemeal replacement of these functions by public agencies. Important among these, of course, was asylum psychiatry; but this came to be seen as not only an ineffective response to social ills, but one which came too late. Just as good drainage and physical hygiene had improved the physical health of the population, so analogous measures would guarantee its mental (and moral) health. The breeding-ground of all disorders came to be seen as the family, and it was on this site that measures were concentrated.

As Donzelot shows, a large apparatus was set up to monitor and deal with the 'failures' of family life, opening up in the process new avenues of intervention into the family itself. The achievement of psychoanalysis was to provide a systematic theory, a set of norms and a technology for regulating private lives. Some of its major advances were in fact made in the context of the two World Wars, when new opportunities arose to develop psychological remedies for military problems. Psychoanalysis achieved its dominant position within American psychiatry, however, by riding in on the wave of the Mental Hygiene Movement, which sought a radical reform and broadening of mental welfare services. This approach, with its emphasis on detection and prevention of mental disorder at an early stage, called into being a system as much concerned with socialisation as with care and relief.

The precise role of psychoanalysis within this system is perhaps the key issue that most sharply divides its supporters and detractors on the Left. According to Althusser (1971, p.178), the French Communist Party's rejection of psychoanalysis was based on a failure to recognise the travesty which American psychiatry had made of it: 'the "dominant" ideas, in this case, were playing their "dominating" role to perfection, ruling unrecognised over the very minds that were trying to fight them.' Lacan's more authentic reading would show that the biological and medical interpretation of psychoanalysis was, in fact, a heretical departure. Jacoby (1975) repeated what the Frankfurt School had argued all along, that psychoanalysis was not about 'nature' so much as 'second nature', quoting Marcuse (1962) as follows: "Freud's theory is in its very substance 'sociological', and no new cultural or sociological orientation is needed to reveal this substance." According to Jacoby, the authentic gloom of Freud's analysis of modern life had been excised for the American market, and replaced by a view in which achieving harmony between individual and society was merely a technical problem.

It is indeed true, as Paul Hirst points out (1981), that psychoanalysis has been by no means as universally influential in the formation of the psy complex as Donzelot and others assume. However, the mere fact that analysis remains a minority treatment should not blind us to the enormous influence that Freudian ideas have had on a wide range of forms of intervention. Even where an approach was adopted (such as learning theory) which nominally opposed psychoanalysis, such alternatives were fashioned in debate with psychoanalysis – a debate conducted in its own terms. And to complain that psychoanalysis was unwillingly co-opted into the mental welfare system is to ignore the prodigious efforts made by Freud himself to gain a foothold for it in the USA (see Castel, 1982, p.324).

This widespread dissemination of psychoanalysis, however, was indeed accompanied by a transformation of its original principles. Freud's ideas were only taken up in so far as they suited the aims of the psy complex; it would be as misleading to read off his views from the practices which purport to be based on them, as to try and infer Piaget's thought from the 'child-centred pedagogy' which claims him as its mascot (Walkerdine, 1984). In both cases, the take-up was selective, and one can imagine other uses to which the theories could have been put. To decide what psychoanalysis 'really' is, is like speculating about what Jill would be like if she hadn't married Jack twenty years ago; Jill may have had characteristics before the marriage which seem to have disappeared now, but on what grounds can we claim that this was the 'real' Jill? Nevertheless, in concentrating on the lowest common denominator which psychoanalysis shares with the rest of the psy complex, we may miss more essential features which set it apart.

The very lowest of these common denominators is something so obvious that one may easily overlook it – the *individualism* of psychoanalysis; the fact that it treats problems arising on social life in terms of the properties of individual subjects. It is the defining feature of all psychology that it takes the individual as the unit of analysis; Henriques et al. (1984) see this as intrinsically connected with psychology's functions of surveillance and regulation.

At the next level of specificity, which sets psychoanalysis apart from organic or genetic theories of personality, but leaves it undifferentiated from other environmentalist approaches, is the conviction that the determinants of individual dispositions are to be found in childhood, and that treatment can modify these dispositions. This, it will be noted, says nothing about the unconscious, or about sexuality, therapeutic technique, or the discontents of civilisation. To that extent it overlaps with the principles of behaviourist learning theory: Castel (1982, p.51) points out that, so far from being sworn enemies, psychoanalysis and behaviourism in the USA have often made a fruitful partnership. (It was J.B. Watson himself who suggested that 'any man in a position to serve in high public office should be obliged to submit to psychoanalysis.') But only a superficial acquaintance with the content of the two theories is required to see how much of Freud's thought must be set aside to make such a partnership possible.

Whereas the focus of intervention for the asylum system had been insanity, twentieth-century forms of mental welfare

concerned themselves with malfunctioning in everyday settings – 'failure to cope' (Armstrong, 1980). Such failures were encoded via the theoretical construct, 'neurosis', which – in the new sense which he gave to it – was Freud's chief gift to the psy complex. The concept of the unconscious, on the other hand, was taken up somewhat selectively by American psychiatrists. Rather than furnishing them with a critical perspective on bourgeois society, or a 'decentering of the human subject', it mainly served to reassure them that they could safely adopt a psychological approach without giving up their traditional claim, as doctors, to know better than the patient what was wrong with them. The notion of the unconscious thus played a central part in building a professional ideology for the psy complex (Scull, 1979). A theory which relegated the patient's own views about what was going on to the status of fantasy, and which took disagreement, or 'resistance', as a sure sign that the professional was in the right, did wonders for professionals anxious to secure their cognitive authority as experts on the field of human subjectivity.

As I have remarked above, classical Freudian therapy was by no means the main contribution of psychoanalysis to the psy complex. Such treatment was too expensive and time-consuming to be suited to more than a tiny minority of cases: for other patients, and other fields of intervention, new 'psychodynamic' methods had to be evolved. The most obviously recognisable are the post-Freudian, neo-Freudian, and even anti-Freudian forms of individual therapy, which sprouted prolifically in the fertile soil of the American market. In addition, Freudian principles were extrapolated to the construction of institutional regimes, of which group therapy was the mainstay; in this case, the object of transference became the group, rather than the doctor running it. When such methods were employed in the construction of therapeutic communities, we see a remarkable revival of the moral treatment pioneered over a century before by Tuke and Pinel. The aim of both treatments was to recreate the family environment in which disorders had supposedly arisen, this time under strict technical control, so that the deep-seated problems could be 'worked through' in a new context.

Other forms of intervention did not use Freud's prescriptions regarding therapy, but instead took his notions about development and family life as their guiding principles. Social workers, for example, did not ask their clients to free-associate or produce dreams, but they commonly understood the client's attitude to them in terms of 'transference', and attributed their problems to the insidious workings of unconscious fantasy – rather than to real social difficulties, which they had no mandate to remove. Agencies concerned with the promotion of norms of family life (such as family or juvenile courts) looked to psychoanalysis for the normative principles which defined a 'healthy' upbringing (e.g. the notion that boys need a father in order to grow into men). The wide range of services designed to monitor and regulate the environment of early socialisation (child guidance clinics, parent education courses, early detection schemes) was founded on the Freudian dogma of the infantile origins of neurosis – even though actual psychoanalytic theory was from time to time deemed unfashionable. John Bowlby's 'attachment theory', for example, is a set of ideas which have been highly influential in forming pedagogic attitudes and public policy, based on a bowdlerised – or should one say Bowlbyised? – version of analytic theory.

Wider afield, we may note the influence of psychoanalysis on marketing, on industrial organisation, and educational practices. Finally, there is the dissemination of Freudian ideas into popular culture. This process, which by-passes the professional nexus, is an aspect of what Brinkgreve et al. (1979) term 'proto-professionalisation', and is perhaps the most far-reaching of the effects of psychoanalysis. In the USA, it has not merely restructured people's ideas about what would constitute an adequate response to personal difficulties; it has become a world-view. As Castel (1982, p.261) puts it, 'Psychoanalysis was the main instrument for the reduction of social issues in general to questions of psychology.'

To describe the political character of psychoanalysis, however, it is not simply to list the types of intervention which it informed, without describing the content of the interventions. What sort of values and social ideology were associated with the name of psychoanalysis?

Here we reach the kernel of the contradiction which forms the topic of this essay. For to characterise psychoanalysis simply as 'conformist' or 'libertarian', 'progressive' or 'reactionary', 'pro-family' or 'anti-family', is impossible; in reality, it is all of these things. This ambivalence can be traced to the essential paradox of the welfare system of which psychoanalysis forms a part. For at the same time as it maintains and reinforces traditional forms of social life – in particular, the family—the psy complex undermines their very basis, by taking away their rights to self-determination. To adopt a global metaphor, it props up the ailing regime of the family, by turning it into a puppet dictatorship or client state with no real autonomy. Thus, the psy complex does not simply reinforce the family, nor simply undermine it. In a subtle holding operation, it manages to do *both*.

This point is made most effectively by Donzelot (1979), who compares Freud's role in the social realm to that of Keynes in the economic. Just as Keynesian economics maintained the mainspring of capitalism—the profit motive—but brought it under political control with a system of checks and balances, so Freud devised a technology which enhanced individual autonomy in some respects, yet retained the family as 'the horizon of all individual paths' (op. cit., p.232). In doing so, he struck the necessary balance between 'the necessity of imposing social norms of health and education, and that of maintaining the autonomy of individuals and the ambition of families as a principle of free enterprise' (ibid.). (There is a further parallel between Freud and Keynes, which Donzelot does not remark, but which is pointed out by Hirst (1981): that the doctrines of both were significantly distorted by the agencies which took them up.)

Though Marxists have long emphasised the role of the family in physically reproducing and servicing producers and consumers, Donzelot's emphasis on the family as a generator of 'ambition' (what we might call 'the Dallas principle') points to individual identity and motivation. Ambition, in fact, is not quite an adequate term to describe the scenarios and compulsions which the family bequeathes to its offspring. We must also take into account the mechanisms described by Chodorow (1979), through which the urge to mother reproduces itself, and also the general process of appropriation of cultural resources posited by Vygotsky and elaborated by the Berlin school of 'critical psychology' (see Elbers). The more we study these processes, the more illusory becomes the opposition of individual autonomy and family structure; the two are, in fact, mutually constitutive.

The ambivalence of psychoanalysis in relation to the family lies in the fact that it can unmask, and potentially dismantle, the mechanisms which hold the family together; it can untie the sacred bonds which hold fast man and woman, parent and child, in its stifling embrace. Yet it can also use this knowledge to tie the bonds even tighter, if it chooses. The wealthy intelligentsia who were the first clients of psychoanalysis (and will probably be its last) sought an escape from conventions of family life and sexual morality which were seen as no longer functional (what would nowadays be called 'getting rid of your hang-ups'). Castel (1982, p.32) claims that the first adherents of psychoanalysis in the USA were 'in rebellion against New England puritanism and

moral conformity', and no doubt Freud served them well. Yet the extent to which such an escape was permitted was circumscribed by psychoanalysis itself; and there is little doubt that, especially in the versions produced for consumption lower down the market, psychoanalysis defended more traditional values than it opposed.

It did so chiefly by reducing the elements of human existence to the nuclear family (what Deleuze and Guattari (1977) term the 'mama-papa matrix'), and by insisting on the inevitability and universality of certain emotional patterns, notably the Oedipus Complex. (If you were unfortunate enough not to have an Oedipus Complex to start with, Deleuze and Guattari wryly note, the analyst would start by installing one for you.) In addition, the dominant American version of psychoanalysis (ego psychology) emphasised the reinforcement of the ego, that is, of the 'reality principle', which is as much concerned with social realities as with physical ones. By conflating the two sorts into one absolute and unquestioned principle, psychoanalysis reified the social order into a timeless law. Thus, the conservative effects of psychoanalysis were closely bound up with the theory underlying it—a topic we shall deal with in the next section.

We may analyse the political stance of psychoanalysis, not only in its attitude to family structure, but also through its dealings with the individual subject. Here, criticisms relate to the power-relationship between analyst and patient, and the picture (once again) is by no means straightforward.

The commonest criticism, from a liberal standpoint, is that psychoanalytic technique is authoritarian and manipulative; it exercises a kind of totalitarian power that treats the patient as an object, or at best a sort of child. Castel (1972) stresses that, despite the liberal connotations of 'free association', the power-relationship between analyst and patient is highly asymmetrical; the analyst, in the name of 'technique', banishes certain topics by treating them only as masks for other topics. Any questioning of the way the analyst exercises his or her powers, for example, is treated as material for interpretation only. This one-sided relationship parallels that to be found between professionals and clients throughout the rest of psy complex. Elsewhere (Ingleby, in press) I have argued that the power of these professions is very largely based on the parental nature of the relationship which is on offer. (To this it shoud be added parenthetically that the *style* of parenting offered has changed in recent years, away from an autocratic and omniscient posture towards a more democratic and 'client-centred' one.)

Yet it is too simple to regard psychoanalysts as paternalistic in the same sense as priests, doctors or social workers. What is unique in analysis is the fact that this 'transference' is quite explicit and becomes, indeed, the main vehicle and topic of the therapy. Though it looks as if the analysts are merely aiming to install themselves in the parent's place, the better to control their patients, it is paradoxically the aim of analysis to destroy the very scenario on which it is built. Analysts are supposed to act as a 'blink screen', in order to reveal the images being projected on to them. They are, in effect, playing at not being there, in order to demonstrate that the patient's attitude to them is not based on reality, and must therefore be given up. So, far from telling patients what to think or do, much of their efforts go into sidestepping the patients' attempts to get them to do just this.

In psychoanalysis, then, transference is like a ladder which is thrown away when the goal is reached; not to have 'worked through' it thoroughly is the tell-tale sign of an 'incomplete' analysis. The aim of analysis is a relationship thoroughly cleansed of all parental undertones, which enables the patient to dismantle the familial scenarios which have previously structured and dominated his or her life. Doesn't this sound like emancipation?

The critics, however, are not attacking the ideal outcomes of analysis, but what goes on within it, which is rather like a game of football played on a sloping pitch. What is constitutive of dialogue is the equality of the speakers—the fact that both sides respond to each other's utterances according to the same rules, and accept a commitment to respect each other's communicative intentions. A situation in which everything one partner says is routinely reduced by the other to the status of material for interpretation is clearly incompatible with this ideal. Indeed, as Lomas (1982) points out, it is probably rather bad for people—especially if they find relationships problematic in the first place. The lack of reciprocity between analyst and patient makes the relationship less than a human one: Freud's 'rule of abstinence' specifically forbids analysts from presenting themselves to their patients as *persons*.

Psychoanalysis, however, never set out to be a humanistic or phenomenological method. It is true that understanding another's point of view requires treating them as an equal in the dialogue; but if you want such a therapy, the analysts would say, you are free to choose another variety such as client-centered therapy or (better still) co-counselling. Psychoanalysis, as Ricoeur (1970) pointed out, is not a species of phenomenology, and its method can never be purely hermeneutical; its systematic mistrust of the patient's viewpoint is required in order to gain a leverage on resistance and to reveal the patient's compulsion to lie about certain topics. One dosen't enter into negotiations with the Unconscious. To be liberated from one's own self-deceptions, which is the sort of emancipation Habermas (1972) sees in psychoanalysis, one has therefore to forego the 'unconditional positive regard' enjoined on therapists by Carl Rogers.

But the problem with this ideal of critical self-reflection is: where do the criticisms come from? If they come from an authority regarded as absolute, the so-called emancipation leads straight back into domination. (This, in fact, is the basic criticism of 'critical theory'). Now insofar as the criticism of one's self-perceptions comes from the analyst in person, we have seen that the authority ascribed to this figure is but a symptom of immaturity, which is fostered only in order to eradicate it. The 'full analysed' patient is free to treat the analyst as a cognitive equal, whose interpretations may reasonably be rejected if one can come up with better ones.

To see the analyst in *person* as the locus of authority, however, is a basic error. As we have seen, technique requires that the analyst's person should be kept totally hidden (witness the placing of the chair behind the patient's head); the interpretations come, in fact, from the doctrines of psychoanalysis, which the analyst represents in much the same way that the priest represents the doctrines of the Church, ('Not I, but Freud within me. . .') Thus it comes as no surprise that the patient's interpretations can stand on equal terms with the analyst's; the acceptability of *both* depends on their conformity with the framework of psychoanalysis. What the patient submits to, is not the rule of the analyst, but the rule of *analysis*, to which the analyst is every bit as subject. The real authoritarianism of psychoanalysis lies, not in the domination of patient by analyst, but in the domination of both by a analytic doctrine.

This is not mere hair-splitting: it is the resolution of the paradox that 'working through the transference' abolishes the analyst's authority, while building up that of psychoanalysis itself. I would submit further that the relationship to psychoanalysis itself is also ruled by irrational, unconscious processes, and that *this* form of transference is never worked through, since the analyst is likely to be as thoroughly immersed in it as the patient. That psychoanalysis is a supernatural

authority of analysts, as well as for patients, is betrayed by the curious behaviour of its practitioners towards their profession. To some extent their protectiveness is justified by the necessity of defending it from the real enemies that surround it; but their belief in its intellectual omnipotence, their obsessional preservation of its rituals (see Lacan, 1973), their scornful attitude to outside criticism and internal heresy—all these are more the hallmark of religion, than of a practice that claims to be the quintessence of rationalism. What the analytic community fails to understand is that it is not the truth of its beliefs which needs defending, but the grounds on which they are arrived at. Psychoanalysis can never claim legitimate authority if it is presented as a divine revelation.

We thus arrive at the conclusion that, although psychoanalysis is concerned with raising consciousness, and thus with raising certain powers of the self, it does so by attenuating certain other powers. Though productive, in Foucault's sense, it is also repressive; it demonstrates how wrong it is to regard productive power as *replacing* the repressive sort.

The way in which psychoanalysis 'produces' new forms of subjectivity, both for patients and in the culture generally, is the same as the process by which those around the child create his or her subjectivity in the first place. To understand this process, it is necessary to introduce the ideas of Vygotsky or Mead rather than Freud himself. The disclosure of psychoanalysis provides a framework of interpretations and implicit responses, in terms of which individuals may orient and articulate themselves; it thus gives them a 'position' within a discourse, in which to exist as subjects. Autonomy and awareness come into being in the space between analyst and patient (Ingleby, 1983).

This process also describes the productive effects of psychoanalysis within the culture generally. According to Foucault (1978), sexuality was not 'repressed' in the Victorian era, but endlessly talked about at a professional level; Freud did not shatter a silence, but merely transformed one discourse into another one. The discourse about sexuality (which had its ultimate origin in the religious confessional) embodies the codes which structure and regulate social life. Though these codes function 'productively', they are nevertheless imposed in a thoroughly 'repressive' way—as is also true, incidentally, of the codes within which subjectivity originates in childhood. Every discourse has a non-negotiable foundation which must be accepted as a condition of participating in it. As English people know from birth, there are things one simply doesn't talk about, and things one simply doesn't do: the child soon discovers that to certain 'why?' questions, the only answer is 'because'. It is in the parts of itself that the discourse does not allow to be questioned that its repressive power is concealed. In psychoanalysis, these parts are rather extensive. As Donzelot puts it (1979, p.230), 'the discourse of the psy professions credits the family with being both the only model for socialisation and the source of all dissatisfaction: it enables them to circumscribe the position of their clients, to mark out its circuits and block it exists.'

Psychoanalysis As a World-View

To bring in psychoanalytic theory at this point is not to change the subject: rather, to try to analyse the discourse of psychoanalysis as if it did not have an explicit and elaborate theoretical basis would be absurd. The theoretical counterpart of the 'familialism' embodied in psychoanalytic practice is the Freudian insistence on the elemental nature of certain types of family relation as the cradle of subjectivity. In this gaze, every influence on socialisation except that of the family is rendered invisible.

Not only does the family become 'the horizon of all individual paths', but it is a family frozen into the particular historical form in which Freud happened to find it. Marcuse may be right to argue that Freud's theory 'does not require the addition of a sociological dimension', in the sense that it places development firmly within the parameters of a basic social institution; but these parameters function exactly like constants in a physical law—they do not explain anything since they can never vary.

One might argue that Freud treated the social order of his time as a constant out of conscious conservatism, because he did not think there could be a better one; but in fact the theory that he wrought gave him very little choice, since it insists that this social order is the only possible one, given the 'human nature' out of which it has to be constructed. Freud did not see political ideals such as equality between the sexes, solidarity among mankind, or fulfilment in work as either practicable or desirable, save in miniscule amounts. This is because, on his view of human nature, alienation in all of its forms is inescapable. American psychiatry thus did not suppress the 'radical vision' of psychoanalysis, as Jacoby or Althusser would have us believe: there was no such vision to suppress.

The Inevitability of Alienation

For Freud, civilised man was inescapably at loggerheads with himself and with other men—and increasingly so as civilisation progressed. Both intelligent behaviour and social organisation entailed conflicts with human nature which made frustration inevitable: in Freud's metapsychology, the relationship between Ego and Id was essentially one of colonisation. This set severe limits on what could be achieved by therapy, and the optimistic project of using psychoanalysis to produce a happy reconciliation between individual and society—as American Freudianism sought, by and large, to do—was a hollow travesty of Freud's own philosophy. 'Transforming hysterical misery into common unhappiness' was the most that Freud claimed to do for *his* patients (1984/1954). Neither, of course, could Marxism free us from our chains, for the chains were part of our humanity itself.

To mitigate the severity of Freud's diagnosis, Marcuse (1962) introduced a distinction between 'basic' and 'surplus' repression—the former being that which was required to maintain civilised behaviour generally, the latter being added to this by forms of social domination. As far as Freud was concerned, however, the removal of 'surplus' repression would make hardly a dent in the sum of human misery. In the following sections I shall examine the different ways in which psychoanalysis can be thought to imply the inevitability of conflict. Freud's belief in this inevitability was, as he would say, 'overdetermined'; several different lines of reasoning led him to the same conclusion.

The Axiomatic Approach

Occasionally Freud makes it clear that for him, the opposition between 'reason' and 'instinct' is axiomatic, inherent in the concepts themselves. In accepting this presupposition, he was merely subscribing to the dominant conceptual framework of his time; that 'natural' desires were inherently 'unreasonable' ones was, for the average citizen of the nineteenth century, an unquestionable piece of wisdom, and we will be committing a pardonable solecism if we regard Freud as a typical Victorian in this respect. The dualism can of course be traced back to Descartes, and still further—although it was not without its critics, such as Rousseau, in the romantic epoch.

We see Freud elaborating this idea in his discussion of aggression in the case of Little Hans (1909/1956): Here, he refers to:

> . . . a universal and indispensable attribute of all instincts and impulses—their 'impulsive' and dynamic character, what might be termed as their capacity for initiating motion (p. 28).

The attribute, Freud goes on to suggest, lends to all conduct an aggressive (and, by implication, anti-social) character.

Horowitz (1977) demonstrates the same sort of preconception in his assertion that human drives are inherently 'distant from reality' (p. 9). Having accepted this idea, of course, Horowitz commits himself to a form of 'basic repression' that effectively pre-empts much of his subsequent discussion. A little conceptual analysis, however, soon shows that this notion is not a logically necessary one. For if what we mean by 'instinct' is simply an end which the organism innately seeks, then instincts have to be controlled merely because they lack form—not because they have the *wrong* form. In this sense it is a category-mistake to see an opposition between reason and instinct, because they are logically not the kinds of entities that can be in conflict. Rationality is concerned with means, instinct with ends, and insofar as rationality provides the means of gratification of instinctual needs, it removes a conflict rather than creating one.

Clearly, there are no grounds here for regarding the relationship between Ego and Id as one of repression; the relationship between cognitive and motivational mechanisms is essentially one of cooperation, not competition. Opposition can only arise because instincts themselves conflict with one another, or because the human mind inherits irrational modes of thought in addition to instincts themselves. However, making this elementary point does not go very far towards refuting Freud's pessimism; precisely such postulates form the basis of his whole theoretical system.

Elsewhere (Ingleby, 1983) I have tried to show that Freud's failure to explain the origins of rationality and consciousness comes from looking in the wrong place—in the individual, instead of 'the ensemble of social relations', and that this reflects a contrast between two world-views, 'Enlightenment' and 'Romantic', in terms of which most psychology remains rooted in the former camp. A theory of the social construction of the ego is implicit in the *practice* of psychoanalysis, and can be articulated in theory with the help of constructs borrowed from Mead, Vygotsky, and recent developmental psychology inspired by these two.

The Competitive Paradigm

I hope to have shown in the above that Freud approached the field of psychology with strong preconceptions about the inevitability of conflict between man and other men, nature and himself. (The conflict between man and woman is another part of the story, too, but one to which I have not been able to do much justice here. See however, Chodorow (1979, Ch.9).) In the case of libido, it is primarily because Freud assumes that the patriarchal nuclear family is inevitable that he sees frustration as necessary; primary process, however, constitutes an apparently innate mode of unreasonableness which militates against adaptation to *any* form of society. I have argued that it is the latter, cognitive postulate of Freud's which most seriously undermines a belief in social progress.

Though I am thus proposing that part of Freud's pessimism should be regarded as warranted, I have argued that most of it is not and it is therefore interesting to consider where his beliefs about human nature might have come from.

Chiefly, it would appear that it is Freud's tendency to ignore the social context of his observations that leads him to make the inferences he does. Freud's method was essentially ahistorical, in that he attempted to infer the nature of what had been repressed from its (unconscious) form after repression—without taking into account the possibility that whatever led to its being repressed in the first place might also have affected its form. Had he done so, the act of repression would have lost its self-justifying appearance, and Freud would have had to seek elsewhere the reasons for man's self-alienation.

For Freud characterises the Id in the same way that white Americans characterised the Red Indian, and colonial peoples generally have characterised the victims of their exploitation. The Indian had to be brutally repressed, so the myth ran, because his behaviour was lawless and wanton; likewise with the 'criminal violence' of the Algerians under the French—so coolly demythologised by Fanon(1967)—and so too with the lawlessness of children, mental patients, the working class . . . and the Id.

But these myths can only be sustained by leaving out of view the political facts of the case; the restoration of historical perspective brings back the justice and intelligibility of what has been repressed. We see that the domination and exploitation of the colonised person *produces* the characteristics which are supposed, by entirely circular logic, to justify it. Thus, the behaviour of the Indians does not reflect the intrinsic character of their culture, but that of the oppression they experienced; likewise, the 'seething chaos' of the Unconscious does not reflect man's biological predispositions so much as the savage force by which they are suppressed.

In order to understand what Freud found in the Unconscious, then, we must bear in mind the violence with which nineteenth-century Europe exploited its citizens—something to which Freud was remarkably insensitive, as his discussion of the case of Schreber demonstrates (Shatzmann, 1973). (For all this, we must hastily disavow the attitude that Freud's observations were somehow unrepresentative of civilisation before and after.)

Thus, we can see that the myth of inherent opposition between nature and culture was congruent with Freud's own conventionally conservative politics, precisely because this myth renders invisible the objective contradictions in society. Viewed in this light, Freud's theories seem not so much a challenge to the received ideology of his time, as a new and sophisticated reformulation of it.

What is this ideology? I have called it the 'competitive paradigm', because it sees any gain to one individual as entailing a corresponding loss to another. This, of course, is also the ideology of 'possessive individualism' (see Macpherson, 1962); although this view of society has its roots in the eighteenth century, it has enjoyed a sudden and spectacular revival in recent years, as part of the philosophy of monetarism. The concept of 'free enterprise' embodies an implicit assumption that enterprise which is free is competitive, because human nature is such that people would never of their own accord enter into cooperative arrangements. (The fact that even under capitalism, they persist in doing so, is always conveniently overlooked.) 'Laissez-faire' economies, instead of being seen as the forced contrivances which they are, are implied by their very name to be the outcome of letting things happen 'naturally'.

The assumption that 'free' enterprise is competitive entails, in turn, that cooperation in the common interest must be coerced; thus, socialism is identified *a priori* with iron rule and the end of liberty. Christianity is regarded in much the same light: for Freud, 'love thy neighbour as thyself' was a ridiculous and repressive injunction. 'The commandment is impossible to fulfil; such an enormous inflation of love can only lower its value, not get rid of the difficulty' (Freud, 1930/1961, p. 80). In short, therefore, we do not need to seek the origins of Freud's beliefs in his discoveries, his private political views, or his personal state of mind; they were very much a part of his time, and of ours as well.

The Necessity of 'Revisionism'

It should be clear by now that Freud's theories, in the form in which he left them, are not compatible with Marxism, or even with a liberal belief in progress. This raises problems for the 'new Freudians', who maintain that it is only subsequent 'misreadings' of Freud that have given rise to the impression of reactionary ideology. Jacoby (1975) sees Marcuse as 'unfolding' Freud's concepts into a revolutionary vision of history; but this 'unfolding' turns out to be of precisely the same kind as that of the conjuror who unfolds a handkerchief to reveal a flight of pigeons or a white rabbit. Jacoby is scathing in his attack on 'revisionist' versions of psychoanalysis—but without a substantial amount of revision, Freudian theory cannot legitimately be used for any but its traditional conservative purposes.

Of course, it may be the belief in progress which ought to be revised in the light of Freud; but in view of the foregoing discussion, I do not think Freud's arguments for the permanence of the existing order can be sustained—with the possible exception of 'primary process', to which I shall return below.

What would Freudian theory look like, then, if its more obviously ideological components were removed? I would argue that provided primary process remained intact, little of substance would be lost: the 'intertia principle' is neurologically false any way, the 'Death Instinct' is a speculative afterthought, and the inevitability of the patriarchal nuclear family was never a truly *psychological* postulate in the first place. A psychoanalytic account of child development which takes into account the infant's sociability already exists, in the British school of 'object - relations theory'. Obviously the question deserves a more careful answer than these few lines provide; but I do not think that the removal of ideological preconceptions from psychoanalysis would leave the theory either unrecognisable or unworkable. Unfortunately, until the necessity of this task is appreciated, progress on it is bound to be slow.

What of the remaining postulate, primary process? It could be argued that a species with such a talent for self-deception as Freud ascribes to the human race had but a miserable prospect of discovering a rational mode of social organisation, and could only make things worse if it tried to seek one.

However, primary process is not as incompatible with Marxism as this argument implies. Firstly, as we noted above, the theory that *all* thought is a delusion is self-refuting. Although Freud's theory of rationality is unsatisfactory, psychoanalysis needs such a theory in order not simply to be 'acceptably' optimistic, but to be coherent as a theory *at all*. Secondly, Marx himself (who incidentally shares this problem) places considerable emphasis on self-deception or 'false consciousness' in his account of the production and reproduction of social systems. Although self-deception for Freud operated primarily to maintain mental (rather than social) order, there is no reason why false-consciousness and emotional defences should not take the same form (the paradigm case being, perhaps, that of religion).

Hence, Freud is useful to a critical view of society not simply because he *describes* the inner conflicts of its members so faithfully—in contrast to the bland reassurances of 'humanistic' psychology; he also offers a detailed *explanation* of the compulsions and delusions which make people more at home in an oppressive society than they would be in a free one, and hence suggests what changes are necessary in order to make social progress psychologically possible. It is this psychological problem which Marxists after World War I, and feminists after the 1960s, turned to psychoanalysis to solve. Why was it that when the conditions for social change seemed ripe that people seemed emotionally incapable of accepting a new order? The Freudo-Marxists answered this question in terms of the 'normal neuroses' and compulsions which serve from one point of view, as emotional defences, and, from another, as social ideologies.

What Reich, Fromm, Marcuse *et al*, were essentially arguing was that a society which runs on fairy-tales *requires* that, in certain fundamental respects, its members should not grow up—particularly the less privileged ones; the task for radical psychoanalysis is to show how crippling compulsions arise in the course of *normal* socialisation, and persist because they serve so well the maintenance of oppressive institutions. Freud himself inevitably started this line of criticism by blurring the distinction between sanity and madness, arguing that religion, mass movements and character traits manifested the same structure (in psychological terms) as neuroses.

The development of a truly 'emancipatory' form of psychoanalysis, however, requires its disembedding from the system of practices—the spy complex—within whose constraints it must remain an individualist, adaptationist and essentially conservative form of praxis.

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The Printed Word

Newsclippings on Mental Health

Neglected Mental Health

IT is highly distressing to note that mental health is not receiving the priority it deserves from the government. An estimated 14 million people in this country suffer from severe mental illnesses. Besides, nearly 40 million people who include an increasing number of drug addicts and alcoholics, require mental care... (according to Dr. G.N.Reddy) a disproportionate amount has always been granted to technology at the cost of human health. It pains one to note that health, education and social welfare have taken the backseat... (according to Mohsina Kidwai) only 10 per cent of mental patients were being cared for at present as there were only 1,000 qualified psychiatrists, either working in hospitals or practising on their own in the country... and for every 32,000 people there was only one psychiatric bed (*Deccan Herald,* Bangalore, 20 August 1985).

No Hope for the Insane

The Lumbini Park mental hospital (Calcutta), set up in 1940... (has) no treatment facilities at the hospital, no surgical equipments ... not even an X-ray machine. Though there are six visiting physicians only one psychoanalyst works part-time at the clinic, while three resident physicians, two of them superannuated, hold the fort in their absence. This is hardly sufficient for the 160 inmates, 125 male and 35 female. The patients are kept in sub-human conditions and provided whatever meagre meal is available at a government subsidy of Rs.4 a day... Even drugs, requisitioned from the Central Medicine Store, it is alleged, are insufficient, if available (*Statesman,* Calcutta, 21 April 1985).

Clinical Depression

Depression, a modern term for melancholia, is a common mood (affective) disorder with a long ancestry. The others in this group of disorders are mania and anxiety neurosis... Nearly 100 million people in the world suffer from depression each year... A study from Chandigarh indicates that nearly 20 per cent of patients seen in general medical practice suffer from depressive symptoms with or without any physical illness... In a mental health survey carried out recently near Madurai, depressive illness was found to affect 60 persons per 100 among those aged 60 and above... The drugs which are used to treat high blood pressure, and psychotropic agents which are used for mental illness like tranquillisers, barbiturates, and hormonal preparations such as ACTH cortisone and contraceptive pills tend to induce 'iatrogenic' depression. There has been an increasing use of these depressogenic drugs over the years. The fast disappearance of the protective influences of the family and social support, a sense of 'anomie', a dessication of values, a mode of living bereft of ethics, and a state of 'existential despair', have contributed to augment the numbers depressed... Depression, a recurring illness, affects personal health, bringing psychological misery, precipitates domestic unhappiness, entails a loss of man-hours, and is a significant cause of mortality through self destruction (suicide) (*Science Today,* November 1984).

Ranchi Asylum Deaths: PUCL Report Indicts Government

A non-government inquiry conducted by the Bihar unit of PUCL has indicted the State Government for inhuman conditions in the Ranchi Mansik Arogyashala. Several hundred patients had escaped from this asylum last month... The Committee found that requests by the hospital managing committee to the state government to increase its annual outlay from Rs. 87 lakhs to over Rs. 2 crores went unheeded. The government allowed doctors' posts to lie vacant for years, sanctioning only 14 posts for nearly 1300 patients. Moreover, just one post of lady doctor existed for over 400 female patients. The Committee found no trace of nursing staff, nearly 80 of whom are supposedly employed. There was no staff room in any of the wards... The report said the mortality rate at the asylum has risen alarmingly from seven per cent in 1979 to 20 per cent in the first eight months of this year. In other asylums in the country the mortality rate is one percent. The report attributes the high death rate to government "indifference". The asylum's medical records indicated that a majority had died of prolonged malnutrition. Deaths were also caused by diarrhoea and dehydration. The Committee felt concerned that 58 patients had died over a span of 37 days... (*The Telegraph,* Calcutta, 21 October 1984).

Corruption in Mental Hospital

Relatives of the mentally ill accuse hospital staff (of Agra Mental Hospital) of corruption and callousness and of trying to fleece penurious patients. The staff they say refuse to admit those who do not have clout or cannot pay. The relatives, along with their mentally ill wards, have been forced to hire cots and live on the pavement. They struggle to cope with a situation which looks more hopeless with every passing day, aggravated by rapidly diminishing funds. Apart from paying for the cots, they have to buy food from the numerous shanty stalls that have sprung up to cater to the unexpected refugees. According to Dr. B. S. Yadav, senior medical superintendent of the hospital, patients coming from wealthy families are admitted to the paying ward which charges about Rs. 200 per month. For poor patients, provision of food, medicine and treatment is free at the general ward... Hospital sources allege that free medicines meant for poor patients are being sold... A visit inside the hospital has its own tale to tell—bare bodied patients in tattered khaki shorts cower in fright as guards force them to pull weed or cut grass in the fields (*Indian Express*, Bombay, 13 October 1984).

Mental Institute only in Name

The Institute of Mental Health, housed in the Alipore special jail, is still virtually a jail even though the state government declared it to be a mental institute for lunatic prisoners a year and a half ago. In fact, the government renovated the special jail and converted it into a mental institute for accommodating non-criminal lunatics (NCL) of the Dum Dum Central Jail with a promise to give them a fair deal... Investigations have revealed that only about 200 NCLs were taken to the institute from the Dum Dum Central Jail, out of a total of 800 NCLs languishing there (*Business Standard*, 1 October 1984).

Compiled by r.d. from the files of Centre for Education and Documentation, Bombay.

Making of a Psychiatrist

anand nadkarni

The author is a practising psychiatrist as well as a teacher of the subject. In this article he looks critically at the training of a psychiatrist. He highlights the deficiency of the clinical approach and hopes for the emergence of a more socially relevant psychiatry.

PSYCHIATRY as a science never had a privileged position in medical education until recently. The picture has started changing slowly though not substantially. A major reason for this is the undue emphasis on the *biomedical model* of medicine in clinical training. An integrated or *bio-psycho-social model* of medicine even today seems a distant subject. I must confess that my comment is mainly based on my own experience in Bombay and some medical institutions in Maharashtra. But people will agree about similarities in the situation all over the country, with a few notable exceptions.

When I was on undergraduate student, not long ago, our month long clinical term in psychiatry was usually designated as a "leisure term" because we used to get only an optional short question (of 5 marks) on psychiatry in the theory papers of general medicine. The insistence by undergraduate students to take 'clinics', which usually takes resident doctors on an egotrip, was a privilege shared only by our medical and surgical colleagues. Things have changed of late. Students attend the term in psychiatry, and more sincerely. However, much of the credit for this goes to the introduction of a 35 marks section on psychiatry in the medicine theory paper by the University of Bombay.

Now, it is for the teachers in psychiatry to use this opportunity to inculcate genuine psychological awareness in students who will be general practitioners and consultants of the future. Recently one of our patients suffering from schizophrenia was advised by a medical consultant to get married, as that was the only remedy. Such statements although given (presumably) with a lot of goodwill underline the lack of basic psychiatric training given hitherto to the undergraduate students.

The average student, because of these lacunae, never ever develops a sound psychosomatic approach in his future career. Hence a patient complaining of persistent functional vomiting entering a general-surgical OPD of a big hospital first undergoes a series of investigations, including 'scopy', before being referred for a psychiatric evaluation.

This attitude of looking towards a patient as a mere 'case' stems from the basic lack of psychosocial orientation. Undergraduate students are never taught essentials of doctor-patient relationship, therapeutic effects of doctor-patient interactions, communication skills which can have both good and bad prognostic implications for the patient. It will be a surprising fact for some, but these subjects are not taught even to most postgraduate students of psychiatry. Virtues of spontaneity and intution are seldom stressed. Failure to master communication skills, makes us mere 'tic-markers' on the symptom check-list. Suppose I want to examine a four year old child in the psychiatry OPD, I make him sit on a stool near me. He has to literally strain his neck to look upto me. But suppose I place him on the table before me, our eyes come on the same level; I can pat his shoulder; I can also observe the spectrum of emotions on his face and corroborate it with his words.

Unfortunately we tend to cover up our failures to communicate under the term 'clinical distance'. To keep clinical distance between a patient and a doctor is one of the vague terms in an otherwise accurate medical vocabulary. If I visit some of my recovering patients' homes as a part of the process of rehabilitation, I am branded as a 'social worker' as if a doctor cannot and should not be a 'social worker' when the patient's welfare demands it. If a consistent bond of friendship is built between a patient and a clinician, which helps the medical bond then either the clinician is labelled as having a 'counter transference problem' or is simply ridiculed. Again, everybody in theory acknowledges the need for better communication, and everybody tries to explain the 'nobleness' of our profession on that basis. But 'doublespeak' is the rule of the day.

Most undergraduate studnets never grasp objectivity of mental status examination, during their clinical term. It has been a troublesome experience for me, when our clinical (mental status) examinations are often branded subjective; whereas even if two or more cardiologists argue on presence or absence of a murmur, the objectivity of their examination is never in doubt Fluctuating signs and symptoms is as much a property of schizophrenia as multiple sclerosis. This fact is often forgotten. One of my undergraduate students was amazed to note that 'insight' and 'judgement' could be really tested. He had thought of mental status examination as a mere data of inferences.

It is important to note that the average postgraduate student in psychiatry comes for his clinical training with such a background. In addition, I have often seen fresh entrants coming with a lot of dreamy notions about psychiatry. They think of it as a merely 'interesting' subject, something that is thrilling. During their period of residency their views usually get crystalised in the domain of biological psychiatry in contrast. After all the undergraduate biomedical influence tells, and that spicious by their absence in the postgraduate arena. But even a broad based psychosocial perspective is lacking. Average postgraduate students do not come to terms with the prevalent psychosocial reality of people from various stratas of society. Many students brand psychological and social angles as too theoretical and too abstract. Nor surprisingly, *psychotherapy techniques* never come higher up on the priority list for such students. Any psychotherapeutic work that the student does is only out of that perosn's own initiative and is hardly supervised. Wherever 'honorary' system for teachers is prevalent, this is likely to be 'the truth'. One of the essential therapeutic tools for a psychiatrist in our circumstances is to be conversant with

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techniques of group psychotherapy. Many postgraduate students pass their examinations without even facing a single group. No wonder, patient-education is conspicous by its absence in psychiatry. Psychiatry students (postgraduate) seldom venture into explaining the essence of psychopathology in simple terms to the patient.

Not that postgraduate training is totally deficient; analysis and elicitation of signs and symptoms is taught upto the mark. At many places, training in psychopharmacology is adequate. What is not taught, is how to face many controversies in psychiatry with a balanced head. We are encouraged to take sides too early in our training. Hence we come out either as 'pro-ECT' or 'anti-ECT', to take one example. What is not realised is that such crystallisation of views essentially does not evolve from our own studies and clinical experience but as continuation of what 'boss' (i.e. senior teacher) is following over the years. Clinical training in general is more by precept than debate.

Because of our emphasis on western textbooks we tend to see many problems through their viewpoints. Let us take a concrete example of a young patient suffering from drug addiction. It is a widely noted observation that psychopathic personality traits are more common (either primary or secondary in origin) among drug addicts. Many of our urban addicts, especially from the working class, start the habit not because of these traits but because of ignorance about the whole process. Examples are coming to light from rural Maharashtra, where some unscruplous chemists had started giving unpurified heroin (brown sugar) as medicine to unsuspecting rural patients who approached them with a prescription note from the doctors. Some children in Bombay who earn money by collecting garbage have been lured by their area-goons into becoming brown-sugar addicts; many of them are in the age group between 9 and 11 years. The moral of the story is that any disease neds a dynamic question of oetiology and it cannot be rigid and puritan. We should also contemplate new equations and then try to analyse them.

I think, during our postgraduate training we let ourselves be moulded too much by our mileu. By mileu I mean the outlook of the institution in which we are trained, inclinations of our teachers and the general clinical value-systems adopted. A colleague of mine does not give an injectionof an antipsychotic depot preparation in the buttock of male schizophrenia oatuebt but prefers to give it in the arm so as not to arouse the latent homosexuality conflict which is thought to be present in schizophrenia according to the freudian school. His teacher believed in this and so does he. I personally think this to be too farfetched, though I must admit of having seen a couple of schizophrenics who had accusatory hallucinations with emphasis on homosexuality.

Most of our biases which arise from our training are because we tend to try and fit things into established, rigid models rather than using them as a base and then basing our interpretation in accordance with the unique characteristics that every patient brings in with him or her.

The entire medical training is devoid of the study of philosophical issues in medicine and a candid exposure to the student of social realities. This is all the more reflected in a branch like psychiatry where the *art and science* of medicine should meet. Usually any medico turns defensive when he hears the word 'philosophy'. Philosophical issues in medicine are both simple and complex, depending on your abilities to face them. One of the major issues, for example, is about the scope and function of a 'clinician'. Is it to be restricted to only 'clinical' situations? Should a clinician be a willing analyst of the wider sociomedical issues? Should he take an active part in community-health education? Should he attempt to make creative use of the media . . . In short, should he metamorphose a clinician with a global perspective or get tied down to consulting rooms and operation theatres? In theory, many doctors agree to the expanded role of the doctor but in practice it is hard to behave that way. We fail to understand that the so called 'busy' schedule and social interactions limited to cocktail parties, indicate a philosophical shift under the guide of practicality.

Hence any correction in the present status of training in psychiatry should be one which will influence the overall training in medicine. Only then it will be useful and different from the patch-work remedies. Unfortunately most of the experts on medical education believe that if the present structure of examination is changed then the content and quality of medical training will also change. Hence the emphasis till now has been mainly on examination reforms and widening of curriculum, on paper. Concrete plans and methods of implementation are hardly discussed as they are likely to threaten the existing biomedical structure. Well, there is something called the 'expert's paradise'.

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Different Voices

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"In a Different Voice: Psychological Theory and Women's Development": Carol Gilligan, Harvard University Press Cambridge, Massachusetts, and London, England, 1982, pp 184, 5.95 dollars.

A THEORY is only a representation of truth perceived from a particular point of view. When theorists formulate psychological theories based mostly on observations of men's lives and find that women's experiences do not fit, it is the women who are held at fault, not the theories. Since theory performs the powerful function of validating one's perceptions, when psychological theory negates the truth of women's perceptions, are not the seeds of madness being sown? For society, all perceptions, experiences and behaviour, that fit into a particular predetermined mould, are considered normal, those that do not fit are considered abnormal. Does this then mean that women are by definition abnormal?

A man named Heinz considers whether or not to steal a drug which he cannot afford to buy in order to save the life of his wife. Two eleven-year-olds are asked to resolve this dilemma, which is one in a series devised by Kohlberg to measure moral development in adolescents by presenting a conflict between moral norms and exploring the logic of its resolution. In the standard format of Kohlberg's interviewing procedure, the description of the dilemma itself ... Heinz's predicament, the wife's disease, the druggist's refusal to lower his price ... is followed by the question, "Should Heinz steal the drug?" The reasons for and against stealing are then explored through a series of questions that vary and extend the parameters of the dilemma in a way designed to reveal the underlying structure of moral thought.

Jake, at eleven, views the dilemma as a conflict between the values of property and life, discerns the logical priority of life and concludes that Heinz should steal the drug. While taking the law into account and recognising its function in maintaining law and order, (the judge, Jake says, should give Heinz the lightest possible sentence) he also sees the law as man-made and therefore subject to error and change. Both his judgements, regarding what Heinz should do and the law being subject to change, rest on the assumption of agreement, a societal consensus around moral values that allows one to know and expect others to recognise "what is the right thing to do". Since his solution is rationally derived, he assumes that anyone following reason would arrive at the same conclusion, including the judge.

Amy's response to the dilemma is in sharp contrast to Jake's response. She replies in a way that seems evasive and unsure, and thinks that Heinz should not steal but find some other solution such as raising money somehow. According to her, neither should Heinz steal, nor should the wife die. She considers neither property nor law but the effect of theft on the relationship between Heinz and his wife. Even if Heinz saved his wife's life by stealing the drug, he might be sent to jail for it and then wouldn't be able to help his wife if she became sicker. So they should talk it over and find some way to make the money.

Unlike Jake, who is fascinated by the power of logic and considers the moral dilemma to be "sort of a math problem with humans", Amy views the dilemma as a narrative of relationships that extend over time. Her moral judgement is grounded in the belief that "if somebody has something that would keep somebody alive, then it is not right not to give it to them." She considers the problem in the dilemma to arise not from the druggist's assertion of rights but from his failure of response. Just as Jake is confident the judge would agree that stealing is the right thing for Heinz to do, so Amy is confident that "if Heinz and the druggist had talked it out long enough, they could reach something besides stealing." As he considers the law to have made mistakes, so she considers this drama as a mistake, believing that "the world should just share things more and then people wouldn't have to steal." *Both children thus recognise the need for agreement but see it mediated in different ways ... he impersonally through systems of logic and law, she through communication in relationship.* Just as he relies on the conventions of logic to deduce the solution to this dilemma, assuming these conventions to be shared, so she relies on a process of communication, assuming connection and believing that her voice will be heard, (emphasis mine).

The differences in the responses of these two children shows that infact they see very different moral problems in the dilemma. Jake responds to the question "*Should* Heinz steal the drug" whereas Amy responds to the question "should Heinz *steal* the drug." As can be expected these two responses receive different scores on Kohlberg's scale.

Kohlberg's six stages of moral development trace a three level progression; from an egocentric understanding of fairness based on individual need (stages one and two), to a conception of fariness anchored in the shared conventions of societal agreement (stages three and four), and finally to a principled understanding of fairness that rests on the free-standing logic of equality and reciprocity (stages five and six).

While Jake's judgements at eleven are scored as conventional on Kohlberg's scale, a mixture of stages three and four, his ability to bring deductive logic to bear on the solution of moral dilemmas, to differentiate morality from law, and to see how laws can be considered to have mistakes, points toward the principled conception of justice that Kohlberg equates with moral maturity. When considered in the light of Kohlberg's definition of the stages and sequence of moral development, Amy's moral judgements appear to be a full stage lower in maturity than Jake's. Scored as a mixture of stages two and three, her responses seem to reveal a feeling of powerlessness in the world, an inability to think systematically about the concepts of morality or law, a reluctance to challenge authority or to examine the logic of received moral truths, a failure even to conceive of acting directly to save a life or to consider that such an action, if taken, could possibly have an effect.

Asking different questions that arise different conceptions of the moral domain, the two children arrive at answers that fundamentally diverge, and the arrangement of these answers as successive stages on a scale of increasing moral maturity, caliberated by the logic of the boy's responses, misses the different truth revealed in the judgement of the girl. To the question, "What does he see that she does not?" Kohlberg's theory provides a ready response, manifest in the scoring of Jake's judgements a full stage higher than Amy's in moral maturity; to the question, "What does she see that he does not?" Kohlberg's theory has nothing to say. Since most of her responses fall through the sieve of Kohlberg's scoring system, her responses appear from his perspective to lie outside the moral domain.

Yet, the world she knows is a different world from that refracted by Kohlberg's construction of Heinz's dilemma. Her world is a world of relationships and psychological truths where

an awareness of the connection between people gives rise to a recognition of responsibility for one another, a perception of the need for response. Seen in this light, her understanding of morality as arising from the recognition of relationship, her belief in communication as the mode of conflict resolution, and her conviction that the solution to the dilemma will follow from its compelling representation, seem far from naive or cognitively immature. Instead, Amy's judgements contain the insights central to an ethic of care, just as Jake's judgements reflect the logic of the justic approach.

The above extracts represent the basic arguments set forth in Gilligan's book *In a Different Voice*. Her main contribution lies not in revealing sex differences, which she states have been noted throughout psychological literature. The importance of her contribution lies in discerning that these difference represent two entirely different yet cohesive ways of thinking and looking at the world. Consequently *unlike the interpretation offered by most developmental theorists that women's development is deficient because it does not fit into the male pattern, Gilligan interprets the difference as representing two different but equally valid patterns of development.*

Gender identity, the "unchanging core of personality formation" is "with rare exception firmly and irreversibly established for both sexes by the time a child is around three." Despite the fact that for both sexes the "primary caretaker" in the first three years of life is usually female, the interpersonal dynamics of gender formation are different for boys and girls. Since girls experience themselves and are experienced by their mothers as being more "like, and continous with, themselves," for girls identity formation is fused with the experience of attachment. In contrast, boys experience themselves and are experienced by their mothers as being different and separate, hence male identity formation entails a "more emphatic individuation and a more defensive firming of experienced ego boundaries."

From here on each sex starts off viewing themselves and others as if through a different lens. Gilligan says, "From the different dynamics of separation and attachment in their gender identity formation through the divergence of identity and intimacy that marks their experience in the adolescent years, male and female voices typically speak of the importance of different truths, the former of the role of separation as it defines and empowers the self, the latter of the ongoing process of attachment that creates and sustains the human community."

In the transition from adolesence to adulthood, while the dilemma itself is the same for both sexes, a conflict between integrity and care, a recognition of the need for intimacy becomes the critical experience for men, while for women it is the experience of choice. Since this conflict is approached from different perspectives by both sexes, it generates the recognition of opposite truths. This gets reflected in two different moral ideologies, "since separation is justified by an ethic of rights while attachment is supported by an ethic of care."

Criticising the one-sideness of development theory, Gilligan says, "Attachment and separation anchor the cycle of human life, describing the biology of human reproduction and the psychology of human development. The concepts of attachment and separation that depict the nature and sequence of infant development appear in adolesence as identity and intimacy and then in adulthood as love and work.

"*This reiterative counterpoint in human experience,* however, when moulded into a developmental ordering, *tends to disappear in the course of its linear reduction into the equation of development with separation*" (emphasis mine).

The real significance of Gilligan's work becomes apparent when we consider how development theory shapes the viewpoint of not just psychologists and psychiatrists, but also the general understanding of female nature as portrayed in humour, literature, the media. This has serious implications for the way in which women view themselves in relation to society and in turn how society views women in relation to itself.

Since women do not fit into the pattern of male development, they are considered to have a weak sense of self, an inability for clear thought and action, a lack of objectivity . . . This image of womanhood gets reflected in day to day interactions, and for women, becomes a very debilitating image of themselves to live with. "Women's place in man's life cycle has been that of nurturer, caretaker, and helpmate, the weaver of those networks of relationships on which she in turn relies. But while women have thus taken care of men, men have, in their theories of psychological development, as in their economic arrangements, tended to assume or devalue that care. When the focus on individuation and individual achievement extends into adulthood, and maturity is equated with personal autonomy, concern with relationships appears as a weakness of women rather than as a human strength."

For all of us, our sense of self depends on a validation of our perceptions from others. When women continually feel that they are not being understood or are somehow not saying the right thing, they become more and more unsure of themselves. "As the interviewer conveys through repetition of questions that the answers Amy gave were not heard or not right, her confidence begins to diminish, and her replies become more constrained and unsure." It is this sense of vulnerability, repeatedly heard in women's vioces, that "impedes women from taking a stand, what George Eliot regards as the girl's 'susceptibility' to adverse judgements by others, which stems from her lack of power and consequent inability 'to do something in the world'."

"Further, in a society where women have an unequal status with men, the above mentioned perceptions of women give men the 'right' to view women as inferior, especially since their views are backed by 'scientific theories' which consider women to be deficient. This also gives men the right to exclude women from direct participation in society, and women are thus forced to see themselves "as subject to a consensus or judgement made and enforced by the men on whose protection and support they depend any by whose names they are known."

According to Gilligan, the notion that virtue for women lies in self-sacrifice has "complicated the course of women's development by pitting the moral issue of goodness against the adult questions of responsibility and choice". For women the ethic of self-sacrifice is directly in conflict with the concept of their rights as individuals. This conflict also surfaces time and again within the women's movement, which has emerged in an effort to raise the collective demands of women and to struggle for their right to choose. Strangely, men, whose moral development is so much focussed on the question of rights, in reacting to the women's movement often revert from the higher stages of maturity to stage one or two of Kohlberg's scale of moral development!

The paradox of women's lives lies in the fact that the "very traits that traditionally have defined the 'goodness' of women, their care for and sensitivity to the need of others, are those that mark them as deficient in moral development." Yet if women were to be equally concerned with separation, autonomy, individuation, and their natural rights, as men are, women would cease to fit into the social roles assigned to them by society. Seen from this viewpoint, women would again appear 'abnormal', and perhaps their own family would take them to psychiatrists who would then attempt to make them 'adjust' better to society.

In this context, Gilligan's assertion of the need to broaden development theory, so that it encompasses the various dimensions of human existence, is a necessary first step. A broadening of development theory would mean incorporating the positive aspects of both male and female development as it exists at present. This would also amount to recognising that both male

(Continued on p. 178)

Review Article

The Sorry Story of Psychosurgery

bindu t. desai

"The Stealers—Psychosurgery and Mind Control" By Samuel Chavin, Houghton Mifflin Co. Boston, 1978 $ 8.95.

'What is matter? Never Mind,
What is mind? No matter.' Punch.

THE human condition, through history, has always been marked with dread, anxiety, awe, fear, humbug and much confusion about the entity of 'insanity'. Everyone seems to know what it is, yet there is no general agreement about the whole concept of psychiatric illness, much less regarding the constituents of possibly specific entities like schizophrenia of hyperactivity. For instance, the diagnosis of schizophrenia varies with geography; it is made more stringently in Great Britain than in the United States or the Soviet Union where the condition mushrooms into subtypes (Szasz, 1976). It may have biological markers such as neurotransmitters or chemical messengers that affect the way brain cells work. However 'no unequivocal abnormalities' have been found in the neurotransmitters after three decades of intensive research into their possible role (Snyder, 1982). Both a genetic pre-disposition and as yet undefined infectious agent have been suggested as causative factors (Crow, 1983). Arguments continue whether schizophrenia is one disease or a group of widely different entities presently erroneously being lumped together, nearly a century after the disorder was identified (Hays, 1984).

There are other ill defined entities, that once appearing on the medical scene grow with time. The 'hyperactive' child in the U S or the 'maladjusted' child in the U K grew from three per cent of the U S school children in 1971 to 15 per cent in 1974, with about two per cent of all school age children receiving medications to control hyperactivity in that year. Hyperactivity is defined as: unmanageable, defiant, disobedient, aggressive, lying, truant, unable to concentrate, violent, overactive etc. No wonder Thomas Szasz calls all mental illness a myth—a category error. The brain can be sick says Szasz, but the mind is not an organ; "it is an abstract noun that lacks a concrete referant". (Szasz, 1984)

So we have a field of study where the entities themselves are not clearly defined, the possible underlying mechanisms ill-understood, the role and effect of mainstays of therapy like shock-therapy (E C T) and drugs (the major tranquillisers) controversial. In all of this for the past five decades there was yet another aspect—the surgical removal or destruction of a part of the brain to help or cure individuals with severe mental illness.

It is this form of brain-surgery or psychosurgery that Samuel Chavkin's book discusses, not only in a narrow medical sense but in its wider social and political context. On reviewing Chavkin's book on other related material, I am amazed at the virtual absence of any medical or scientific basis for psychosurgery and of the overwhelming social, political and cultural influences that determined the indications for it. For any surgery, say removal of an abscess or an inflammed appendix, the rationale is two-fold: non-removal will result in greater harm or fatality, and removal result in some alleviation or even a permanent cure. In a non-life threatening condition such as chronic mental illness one is presumably aiming at substantial alleviation if not a cure. Surely removal or destruction of as important and crucial a part of the body as bits of brain requires clearly defined entities at the outset, which have disrupted or incapacitated the individual's life and which no other form of therapy can help. The method of surgery itself should be a standard one so that identical areas are removed or destroyed at the patient's outcome judged not by the operating surgeon but by an impartial observer. None of this was true for psychosurgery.

The Historical Perspective

"This was the most unkindest cut of all" Julius Ceasar.

The history of psychosurgery, even as recounted by the strictly 'medical' account of Kucharski (1984), reads like a macabre piece of science fiction. In fact, the initial proponent of psychosurgery was a world renowned professor of neurology, Egas Moniz of Lisbon, who had invented the technique of cerebral angiography, a method by which dye was injected and x-rays taken to see the blood vessels of the brain. In 1935, Moniz heard two American neuroscientists present a paper at an international conference. They described the effects of destroying the prefrontal area of the brain of two trained chimpanzees thus: "the animal without frontal areas no longer appears to worry over mistakes. Whereas the normal monkey or chimpanzee may become excited, cry or have a temper tantrum or on the other hand turn away and ignore the problem after several successive failures, the subject lacking frontal areas seems quite impervious to any frustrating effects or errors" (Jacobsen, 1936). After the presentation, Moniz stood up and asked "Why would it not be feasible to relieve anxiety states in man by surgical means?" A few months later, Moniz's colleague Almeida Limm used alcohol injections to destory areas of the frontal lobe of a middle-aged woman with 'agitated depression'. Following surgery the woman was said to be markedly less agitated than before. After four patients had been operated upon, Moniz admitted that the patients were more apathetic than he had hoped. The four were sluggish, disoriented and incontinent. The alcohol that had been injected tended to seep further down into the brain than intended, and damaged vital centres that regulate breathing and blood pressure in the brain stem. The referring psychiatrist refused to send further patients for surgery.

But the era of psychosurgery had begun and in the next two decades nearly 100,000 individuals were operated upon (BMJ, 1971) in many countries including India (Valenstein, 1980). The operations were performed for a variety of conditions: aggression, neurotic depression, psychotic depression obsessive-compulsive neurosis, schizophrenia and other psychosis etc., with surgical procedures directed at different parts of the brain: the frontal lobe, the cingulum, the amygdala, or multiple sites. Moniz refined the technique of injecting alcohol to a leucotome—a mental rod with a wire loop that could be extended from its end to cut a bit of the white matter of the brain. In the U S A with true American expertise the technique was further simplified so that the operation could be performed in the doctor's office. Initially an icepick was used as a leucotome by the American psychosurgeon Walter Freeman because other instruments "dog-gone things would break. They weren't as good as an ice-pick."

(Shutts, 1982). The ice-pick leucotome would be forced through the skull immediately above the eye, and the surgeon destroy parts of the frontal lobe by manipulating the instrument. Moniz was awarded the Nobel prize for medicine in 1949 "for his discovery of the therapeutic value of the prefrontal leucotomy in certain psychoses".

Opinions on psychosurgery divided the scientific community almost from the beginning of the operation with proponents consisitently claiming that the procedure made it possible for patients who were suffering from crippling mental illness to lead normal or near normal lives. Others strongly disagreed. They viewed psychosurgery as a multilation of the brain to eliminate troublesome behaviour which turned the patients into 'vegetables'. Informed consent, that is, the patient's active consent to the procedure was not a factor in the decision to operate. Children too were operated upon.

All the while the operation rested on the basis that mental characteristics as different as creativity, memory, initiative and anger were transmitted via a fixed pathway in brains of the mentally ill. A normal person could be angry, happy or sad at various times, but not any of these all the time. Cutting the fixed abnormal fibres in the mentally ill would discontinue their sending the same emotion through the brain. Contrast Moniz's certainty with the comments of Phillips et al, in 1984. They are answering questions put by an imaginary individual who meets neurobiologists every 50 or hundred years. To the question "but can you tell me how the areas of the brain interact to display the integration evident in thought and behaviour?" The answer today would be "no". (Phillips et al., 1984). Surgeons who had performed hundreds of leucotomies were themselves aware of the lack of any physiological basis. One of them, Dr Harry Solomon had been asked by the Veterans Administration in 1948 to "describe the rationale of the operation at somewhat greater length and in terms of pathologic physiology". Solomon replied that a discussion of the rationale "would of necessity be very theoretical, and probably completely unsound. We would be better advised not to attempt it" (Shutts, 1982).

Not only did the psychosurgeons lack a theoretical basis for their procedure, 'they had no way of knowing what they had cut when they made radical stabs with their instruments' (Kucharshi, 1984). They failed to consider damage to blood vessels, or to make allowance for differences in skull size when they made their cuts. The fibres that were supposedly intended to be cut changed as autopsy failed to provide evidence to corroborate the surgeon's theory. Though editorials in the medical literature had repeatedly asked for carefully controlled studies to assess lobotomy (Finesinger, 1949) none were done. A long term follow-up of 707 patients who had undergone lobotomy four to 30 years before showed that 70 per cent of those hospitalised for less than a year prior to surgery were either still living in hospital or were at home in a 'state of idle dependancy'. (Kucharski, 1984).

The Recent Past

"That's the reason they're called lessons" the Gryphon remarked, "because they lessen from day to day." Alice in Wonderland.

The advent of major tranquillisers in the early fifties and their widespread use led to a decrease in the number of psychosurgical operations. However in the late sixties, these operations were advocated as a means of controlling urban unrest. Summer after summer in the years 1964-1968 American cities exploded in anger. In 1967 alone, there were riots in 127 cities as black people in the urban areas vented their frustration, despair and rage. Some Harvard doctors chose to interpret these riots differently, as follows.

"It is important to realise that only a small number of the millions of slum dwellers have taken part in the riots, and that only a sub-fraction of these rioters have indulged in arson, sniping and assault. Yet, if slum conditions alone determined and initiated riots, why are the vast majority of slum dwellers able to resist the temptation of unrestrained violence? Is there something peculiar about the violent slum dweller that differentiates him from his peaceful neighbour?

"There is evidence from several sources, recently collated by the Neuro-Research Foundation, that brain dysfunction related to a focal lesion plays a significant role in the violent and assaultive behaviour of throughly studies patients... we need intensive research and clinical studies of individuals committing the violence. The goal of such studies would be to pinpoint, diagnose and treat those people with low violence thresholds before they contribute to further tragedies" (Mark, Sweet, and Ervin, 1967).

Not surprisingly their view was popular with the U S establishment, for here social injustice was medicalised, racism not mentioned, the victims were blamed, declared to be mentally ill, suitable as candidates for 'scientific research', and possible psychosurgery. The letter caused a furore in the U S but was not without its defendants. The two main authors subsequently published a book called *Violence and the Brain* and continue to hold prestigious university appointments to this day.

Psychosurgery is performed very infrequently nowadays, but it has not been rejected by the medical community. It has an aura of respect, and its opponents are labelled as politically motivated, fanatic in their hatred etc. (Morley, 1985). Psychosurgery is a tragically perfect example that "science is not an objective truth machine, but a quintessentially human activity, affected by passions, hopes, and cultural biases" (Gould, 1980). Many examples of such science and of the pursuit of sociobiological determinism, its popularity and its extensive patronage by the rich and powerful are found in Chavkin's book. It is a chilling story which continues... Every field in biology is claimed as fortifying the belief that while "we may not live in the best of all *conceivable* worlds we live in the best of all *possible* worlds" (Lewontin, 1984). Needless to say such a world is capitalist with the white males at the very top. Biology is recruited to convince us that intelligence is genetically determined, that we have 'selfish geners', and that men are "compelled by their gender to be rogues" (Beckwith, 1984). For a reader who wants to know more about the sorry story of psychosurgery and the larger dimension of sociobiology *The Mind Stealers* can be highly recommended as a good introducton.

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Doctors and Torture

A Report on Chile

AS the strength and awareness of organisations working in the field of health and medicine increase, they will have to identify newer areas and issues to intervene into the many social, economic and political processes in society. For only by generalising their intervention or activities they will be able to generate a health movement. One such issue is the alliance and complicity of the medical profession with the repressive apparatus of the state in both capitalist and post-revolutionary societies. There are many ways in which the individuals and the established organisations of medical profession help the state to better implement, cover-up and justify the repression and its repressive function. One of the most inhuman of them is the torture of dissident political activists and all other prisoners who refuses to submit to the wills of the law-enforcing personnel.

Democratic rights organisations in our country, as well as all over the world have taken up numerous cases of systematic violation of rights of dissidents, more consistently in the last 15 years. Interrogation, torture and other harassments with the complicity of medical personnel have been reported. They have also campaigned to build up public opinion and have pressurised governments on this issue. However, they have not been able to draw the serious attention of the organisations working in the field of health to the complicity of medical personnel in their inhuman acts. Such health organisations, due to their own weakness and the fact that they have started working independently only very recently, have not yet taken cognisance of the very political as well as medical nature of this issue.

A country which has witnessed the most brutal repression for over a decade has now shown the way. If the medical profession decides to fight, decides to genuinely observe and implement the code of ethics it always talks about, it can take positive steps in this regard. This is the country where a doctor social democrat, who also became its president tried to change the social order through parliamentary reforms and was overthrown by a military coup sponsored by the CIA. He and his supporters, and tens of thousands who protested were brutally massacred in 1973 by the military junta of Pinochet. Yes, this country is Chile, and the president was Dr Allende.

Action of Medical Profession Against Torture

A special report submitted by Eric Stover and Elena Nightangle of the Committee on Scientific Freedom and Responsibility, Washington DC, and published in the *New England Journal of Medicine* (October 24, 1985), under the title, "The Medical Profession and the Prevention of Torture" states that the Chilean Medical Association "has called on the military government to end secret detention, the situation in which torture is most likely to take place. Its leaders have met with members of the judiciary to press for the expedition of more than 200 complaints of torture that are stalled in court proceedings." This is indeed a highly politically conscious and bold act in a country where political dissent is dealt with bullets.

The leaders of the Association, of course, suffered for their boldness. Last August, Dr Pinto Castillo, a member of the Association's ethics committee and a Fellow of the American College of Surgeons, was detained by Chilean security forces. This act instead of demoralising these progressive forces in the medical community brought out a new mood of solidarity amongst them, and the medical and scientific associations in Chile, USA and other places came out in aid of Dr Castillo who was banished for 90 days to a small desolate island in Southern Chile without charging him with an offence. The international protest, however, had its effect and on August 22, 1985, 16 days after he was banished, the Chilean military dictators were forced to release him.

The Chilean Medical Association (Colegio Medico de Chile) was established in 1948 and has now a membership of more than 9000 doctors who constitute about 90 per cent of all medical practitioners in Chile. After the military coup of 1973, the Association, along with all other such professional bodies, lost its right to elect its own office bearers. However, this right was restored to it in 1981, and since then, it has played a key role in focussing attention in Chile as well as abroad, on the medical profession's complicity in torture. Dr. Castillo, other members of the Association have done painstaking work in documenting the use of torture by the state and in providing treatment to victims. Dr. Jaun Gonzales, president of the Association in November 1984, presented to the Chilean supreme court documentary evidence of cases of torture, and expressed his concern over the continuing practice of torture. The association has not restricted its activities only to Chile. In mid-1985, Dr. Gonzales along with Dr. Carlos Trejo, Chairman of its ethics committee, testified before the US Congress about the Association's efforts to stop professional complicity in torture.

Guidelines to Prevent Professional Complicity in Torture

Stover and Nightingale in their above mentioned report inform that the Association issued in March 1985, a set of guidelines instructing physicians not to attend to patients under certain conditions. This was as a follow-up to the Association's public statement in November 1984 warning that it would not allow itself to be "turned into a haven and bastion for people who transgress professional ethics". According to the guidelines, doctors should not attend to patients:

(1) If the physician has been ordered not to identify himself or to conceal his identify by physical means;
(2) If the physician encounters a patient who is blindfolded or hooded or otherwise prevented from seeing the examining physician;
(3) If the patient is held in a secret detention centre; or
(4) If contact between the patient and physican can be carried out only in the presence of a third party.

The association has also taken concrete steps to see that these guidelines do not remain on paper. It has held disciplinary hearings on the role of five doctors alleged to participated in the abuse of political detainees. They have also suspended one army physician, Dr. Carlos Herman Perez Castro, for certifying that a political prisoner who was tortured, was in a good physical condition upon her release from a secret detention centre. It should be added here that all such investigations and hearings are conducted by the Association in secrecy and public announcement is made only after its 20 member council reaches a verdict. According to Dr. Gonzales, the president of the Association, as many as 30 to 40 physicians have participated in covering up torture in the last one decade and they will continue their investigations till each is properly examined by the committee.

Although these guidelines were issued less than a year back, they have started to show positive effect. The Association's ethics committee chairman reported that after the guidelines were an-

nounced several military and police doctors had approached the members of ethics committee to report that they had been asked by the authorities to examine or treat prisoners who had been tortured. They also sought assistance from the Association in informing military authorities that they would not become involved in covering up torture.

In a backward bourgeois democracy like India, the flagrant violation of democratic rights of people is a routine affair. Our readers need no introduction on the daily torture of detenus carried out in a small police station to a well maintained torture chamber (like the 'retreat'in Calcutta) all over the country. The women prisoners need a special mention as they, in addition, face sexual abuse. In fact, the rape of a teen age woman triggered off a new wave of protest in the women's movement in recent times.

The democratic rights organisations have done significant work in making torture a political issue. No doubt, doctors have also participated in such organisations. The recent killings of a doctor, who was a prominent human right activist, by the police in Andhra Pradesh shows that individual doctors have played their role, even at the risk of their lives.

However, the medical community as such has much at stake in the system and therefore, its official organisations have consistently shunned responsibility to do anything in this matter. They did not have enough courage even to issue a statement when a doctor was killed for his human rights activities. Indeed, they will take a long time to learn from what their counterparts are doing in Chile. Thus, the responsibility is now with voluntary organisations of socially-conscious individuals working in the field of health to show courage, to build public opinion and agitate in the official associations to pressurise the medical community.

Secondly, at the same time, socially-conscious doctors will have to look into the medical aspects of the problem. As Stover and Nightingale suggest in their report, "physicians (particularly psychiatrists) need to become familiar with immediate and long-term physical and psychological effects of torture, for the purpose of diagnosis and treatment. Although research on the after effects of torture and the means of treating these effects is still in its infancy, recent medical research indicates that the major symptoms of torture victims, which sometimes occur years after the torture, include feeling of helplessness, heightened anxiety, impaired memory and inability to concentrate, nightmares and phobias. Publishing research on victims aids in the prevention of torture by informing the public of the pernicious effects of torture on victims, their families and society at large."

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and female development, while complete in certain aspects is also deficient in other aspects. However, such a change would need to be accompanied by an effort at understanding how much of the pattern of human development is a result of socialisation and how much of it is due to 'inherent' or 'innate' human nature. Such an effort is vital, for without it, there is the potential danger of development theory recognising the importance of both male and female perspectives of development, yet drawing a clear distinction between the two patterns and declaring male and female nature as being 'inherently different'. As it is difficult to say different without saying better or worse, women may once again become victims of such a theory. Finally, since theory reflects a given social context, a change in development theory is likely to come about only when social conditions permit a change in our conception of what we consider 'male' and 'female' in the psychological realm.

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OUR BODIES, OURSELVES

Organising Women on Health Issues

gabriele dietrich

This article tries to draw on experiences which were made while organising rural women in Tamil Nadu, mainly landless agricultural labourers of Dalit background. Health had not been a primary aspect in this process of organisation, it had been used as one of several "entry points", but as things developed, it turned out that health education became a focal point since it raises the crucial question of women gaining control over their own bodies. This control over women's bodies, as it emerged, is one of the most important factors conditioning women's potential to organise and to participate in decision making. This discovery came as a surprise because "health" is not usually seen as a high priority by village women themselves. The participatory research process itself was a means to build consciousness about such social controls and to find ways and means to break them down.

THE participatory research process which was part of a project of PRIA (Participatory Research in Asia), took place in villages near Arkonam, North Arcot among members of a voluntary organisation called Society for Rural Education and Development (SRED) and among women belonging to an independent organisation called Rural Women's Liberation Movement.

It is characteristic that even the formation of SRED as an organisation trying to facilitate rural women's movement, was already the result of a longer process of organisational experience. The initial attempt had been to organise Dalits (they were using the term Harijans at the time).

SRED today works in 50 villages of Arkonam and Thiruttanni taluks, 35 villages are "consolidated" villages where cells of the Agricultural Labourers Union and the Rural Women's Liberation Movement Sanghams (founded in 1982) have been formed, 15 villages are "new" villages in which work has only started recently. Women's Sanghams and Agricultural Labourers Union function largely independent of SRED. North Arcot, like Chingleput, is on the whole a very dry area depending on the monsoon which often fails. Irrigation will be by wells and village tanks. As in many other parts of Tamil Nadu, the water table has been affected by the bore wells. There are two crops, mainly rice, but also dry crops like ragi, maize and kambu (a millet).

Women agricultural labourers have 120-180 days of employment, men up to 220 days. Agricultural wages are as low as Rs. 6 for men and Rs. 4 for women. Supplementary income comes from wood-cutting and selling, also from brickmaking. The land holding pattern is such that there are largely small holdings and only very few cases of land concentration. This of course confines the scope for wage struggles within narrow limits. It is obvious from this background that the people with whom SRED works live in abject poverty and struggle for their very survival.

Integrating Health Work with Women's Organisation

The SRED did not start off as a health organisation. However, poverty being so rampant, health is clearly an important problem. Thus, health work came in mainly as an entry point for women's organisation. It was integrated with other activities like self-employment schemes: mainly embroidery and tailoring to start with, then mat-weaving, weaving of towels and sarees and carpentry. Plans are in process to branch out into cycle and transistor repair. Dairy and poultry schemes have also been tried.

In Arkonam, a special women's shop sells sarees and readymades. The effort to offer weekly opportunity for gyneacological check-up had to be abandoned due to lack of response. Apart from such attempts of income generation, building up rural women's organisation was the main objective. The Rural Women's Organisation has again and again taken up rape cases, wife murder cases, wife-beating cases, also issues like water supply and road building, accessibility of the village tank to *all* (i.e. including harijans and menstruating women) as well as health issues, much of the time by putting organisational pressure to make defunct government services available to the people. Recently, a journal Women's Voice (Mahalir Kural) has been launched to report on women's problem and the activities of Rural Women's Organisation. Again, the journal will also have a section on health, especially drawing attention to nattu vaittyam (indigenous herbal medicine). A drawback is that there are too many men on the editorial board because women lack training in journalism.

The basic concept is to equip women activists to be barefoot doctors, to have a basic understanding of common illnesses and treatments and to make them conscious of improving nutritional standards even under pressure of abject poverty.

The need for sustained health work first became visible in 1979, when a widow approached the organisation in need of an abortion. Since she was ashamed of expressing her problem straight away, she shrouded it in flowery expressions commonly available in village Tamil for this kind of occasion. (I have "not taken bath" for 2 months, i.e. missed the menses). The two young health workers did not understand her and sent her away with some aspirin. A few days later the village drums announced a death. The widow, in fear of ostracism, had committed suicide. It was decided to intensify health work and to link it up with rehabilitation of widows who are generally considered to be inauspicious and a social liability. A full time health worker trained in primary health was appointed and she took responsibility for training mainly middle aged and elderly women in primary health, among these a number of widows and village dais.

From the original 35 villages covered by SRED work, the women were drawn to get training as barefoot doctors. Since they are nearly all illiterate, the training went on for three to four years.

There are hardly any institutionalised health services provided by SRED. The community centre at Ulliambakkam runs a primary health clinic providing allopathic as well as nattu vaittyam (non-allopathic) services for common illness. Once in a week a private allopathic doctor comes voluntarily for consultation in more serious cases. At Kaverirajapuram, a cobblers village, once in a week a health clinic goes on under a tree with a homeopathy doctor who comes as volunteer. In Konalam centre, clinic work was started but had to be abandoned because of transport problem (it is inaccessible by public transport). At Mulvai a clinic was started with a gynaecologist, but this too had to be abandoned because of transport problem.

There are now eleven girls at the Kallaru centre who are working in self-employment schemes. Six of these also do part time health work. Three women full timers of SRED are appointed for training work in primary health. SRED has altogether eleven full-timers now (seven men and four women). Even the men animators who mainly work with the union and do work with men and women there, get all the primary health education with special emphasis on women's problems.

Emerging Concepts of Health

When health work was taken up by SRED, it was only partly integrated with the perspective of women's organisation. It was intended that health work should help to rehabilitate widows and would make basic knowledge of primary health available to a large number of women. However, the content of health education was rather complex and, as it turned out, rather contradictory. It cannot be claimed that all the underlying assumptions have been fully clarified but at least certain trends have become identifiable.

On the one hand, there was an attempt to make government health services available which would imply a curative allopathic approach. This was complemented by seeking the help of voluntary agencies working with an approach of preventive medicine along allopathic lines. This also implied a certain technical enlightenment about family planning methods, much along the lines of government programmes but without the coercive implication of these. The underlying assumption here was that use of family planning methods would automatically benefit women. On the other hand, there was an effort to enable women to really master their own health situation as self-reliantly as possible. This effort was undertaken by methods of nattu vaittyam mainly on herbal base, as well as cheap food supplements. The participatory method which was pursued, finally led to the insight that, instead of using health exhibitions prepared by experts, a team would be formed to prepare an exhibition, especially on the reproductive cycle and birth control. This led to a conflict with the technical approach pursued before and to the discovery that perceptions of sexuality were crucially influencing women's ability to apply birth control methods as well as women's ability to gain mobility and organise. Since these discoveries were an integral part of the participatory research process, it is necessary to follow this process step by step.

In the initial phase, a two day meeting took place, one day with animators of SRED and one day with about 30 women from the Rural Women's Liberation Sanghams. Initial discussions circled around questions like: (1) What are the most common illnesses? (2) How frequent are death in childbirth and child mortality? (3) How frequent are abortions? and so on. It turned out that all of these questions can only be answered within the overall context of abject poverty of the people in this area. Most common illnesses like diarrhoea, dysentery, fevers, breathing problems have all to do with general malnutrition, lack of water and basic hygiene and the constant worries of survival. Apart from this, some ailments were identified as occupational or environmental. There was widespread tuberculosis, probably with underlying byssinosis, among the workers of a cotton mill and there was a village where people suffered from water-induced paralysis. While death in childbirth is not a very frequent occurrence nowadays (partly because of the thorough retraining of village dais), child mortality remains high, especially among girls. Abortions were obviously widespread and a follow-up on this question showed that they are more rampant than assumed. While government services are available in a number of places, they are often defunct and in many cases people also do not have the money for the bus to go to the next health centre.

This overall situation accounts for some of the basic priorities in the health work which were pointed out: To strengthen self-reliance by teaching cheap basic nutrition and herbal medicine; to help to make existing government services available; to propagate family planning.

It was then decided to proceed with the participatory research in the following manner: (1) To document experience where people had organised in order to make government health services available to them. (2) To document the use of herbs, home remedies, indigenous medicines (nattu vaittyam) and to record the positive and negative experiences with such methods; also to document positive and negative experiences with allopathy in comparison. (3) To go more specifically into the question of *women* and health—how do women understand their own bodies? What is their understanding of the reproductive cycle, of birth control etc? Are information and contraceptives available? What are the social taboos? (4) In which sense is the health work an entry point for other women's work? How does it relate to the other work and to the process of getting organised? Why does this work pick up in some places and not in others? (5) What are the most important aspects of the women's work to the women themselves? Why do they feel it is an advantage to get organised? What are their difficulties in getting organised?

It was felt that in order to come to grips with questions 2-5, it would be necessary to have extended discussions and one way to generate them would be to conduct health festivals in different villages with exhibitions, skits, songs and pattimantrams (debate). Apart from the festival itself, the collective process of preparing it would give a lot of opportunities for exchange and clarification.

Already at this stage it became visible that there are indeed very strong social barriers against women taking control over their own bodies. It turned out that many of the village dais who knew everything about delivery, have a very rudimentary understanding of the reproductive cycle. Many women said they did not know about birth control methods. Some had used abstinence in order to space births.

The women said that the health work helped them a lot to build women's sanghams and most sangham members have an acute awareness of health and nutrition, so much so that many sangham leaders become free lance barefoot doctors and health workers. They felt that they learned a lot in the process and derived self respect from this. At the same time their competence about nutrition and simple illnesses also had increased their awareness of health as a business, the profits of the drug industries. Ironically, it seemed often to be the abject poverty which turned out to be a learning aid here. Since expensive nutri-

tional supplements and sophisticated medical services were out of reach anyway, the "do it yourself" approach looked like the only viable option. Among the slightly more affluent families, the drive for self-reliance would be less and the influence of advertising and impact of a consumerist allopathic approach to health more. It was also felt that the health topic needed to be discussed more in the agricultural labourers union and that building a new health system needs to be part of overall transformation of society.

Deepening Levels of Participation

Originally, the health festivals which were organised also included family planning propaganda. Though this propaganda was not particularly oriented towards achieving targets, it shared the commonplace middle class assumption that small families are necessarily happy families, that women only have too many children out of sheer ignorance and that women will happily apply family planning methods once they get acquainted with them. These assumptions had obviously been inculcated in the process of training health workers to propagate family planning and were not supported by the actual experience of working with village women. It became clear in the process of the participatory research where they went wrong and how they needed to be corrected.

A series of health education meetings were held with different types of people, e.g. the girls who learn tailoring in the Kallaru Centre, social workers, nurses, village dais, women who belong to the women's organisation. Apart from general health topics like hygiene, use of native medicine, etc. special emphasis was laid in these meetings in building up knowledge about the functioning of the reproductive system and to build up a different attitude among women towards their own bodies. This is no doubt an extremely difficult task, since everything related to menstruation, sex, childbearing and childbirth is usually taboo and it definitely belongs to the upbringing of a "good girl" not to mention about "these things". The general pattern is that "men are supposed to know" while women are best kept in ignorance. The underlying social assumption is that a girl who has any sexual experience, has been "spoilt". A further assumption often is that even "knowing about those things" "spoils" a girl.

It is also difficult to evolve methods which allow women to open up. One method is sharing personal problems in small groups of two and three. Another method is to talk about all parts of the human body and their functions in order to build an awareness that sexual and reproductive functions are as natural as any other functions of the body. Besides, slide shows were used about the reproductive system. On delivery, role playing has also been used.

There are different kinds of barriers to be overcome in different categories of participants in this kind of a programme. Among young participants, most of whom will be unmarried, there is a general embarrassment which has to be dealt with, giggling, and a certain reluctance to face realities. Among village dais and more elderly women from the women's sangham, there is greater sobriety in facing reality and drawing on one's own experience but the actual level of information is very low.

In a meeting with young girls in which I participated, the embarrassment was such that participants closed all the windows while slide show was going on so that nobody would be able to overhear what was discussed and the showing of slides was accompanied by exclamations and giggles. While the girls expressed afterwards that they found it useful to know all these facts, the question arises how they can be dealt with in real life since the actual taboo of knowing is so great that admitting such knowledge easily leads to accusations.

In another meeting with elderly women (village dais and women's sangham leaders) it turned out that though the women had experience and understanding about childbearing and delivery, many of them did not know about methods of birth control. Some of them had used abstinence in order to space child births. Some confessed to having had abortions. Some had reservations because they found it risky to go in for permanent methods because of child mortality. The tendency in the discussions was to place before the woman the options of birth control (e.g. loop and copper T, operation, etc.) in such a way that they appeared as the scientific way to go about things while abstinence from intercourse was looked at as unscientific and unnecessary infringement of the marital rights of the husband which would create tension and misunderstanding.

In the course of the discussions it became visible that the approach of the SERD animators was somewhat inconsistent. They had the tendency to depict tubectomy as a very good method of family planning because it solved the problem once and for all. It also transpired that, if a woman gets operated, she may have even less control over the frequency of intercourse than before because "nothing can happen" anyway. The man can assert his "right" over her body more easily since no risk of creating further offspring is involved. Woman also felt that they would face more accusations of infidelity if they used contraceptives. The animators applied a "harmony model" oriented towards fertility control only, suggesting that it was quite unnecessary and unscientific to deny a man intercourse in order to space births. It became visible that abstinence in some cases was a simple way of ascertaining sovereignty over one's body—an effect which could not be achieved with all the nice scientific technical methods which may in fact contribute to weaken a woman's control over her sexuality. Women also come up with their views that having to be sexually available hampered their mobility. They found it difficult to come for night meetings because they would be late in coming home. Even elderly women complained of the need to be sexually available very frequently. Sexuality was very much perceived as part of the sexual division of labour, women providing services and man consuming the same. It also became apparent that even women's access to hygiene is very much related to sexual division of labour as well as threat of sexual violence.

While certain general rules like tethering cattle or covering food can be easily followed, it turned out that women do not easily have basic access to hygiene. On being questioned about when they take bath, the usual answer is "on Friday". Friday is the day then they take bath, put turmeric, flowers and clean clothes and go to the temple. The men on the other hand have a daily bath. The problem is not scarcity of water because women may be handling water all the time, washing clothes, scrubbing vessels, watering plants. The problem is one of the division of labour and length of the working day. Women simply do not find the time to take bath. A bath is a luxury reserved for man. (Indeed, detailed enquiries into the working day of women and men among landless agricultural labourers have shown that women work up to six hours more every day.)

Another problem is the lack of privacy. It is more difficult for women to take a bath because women have to be constantly careful not to expose themselves to other men's eyes. This problem also affects their toilet habits. Women go to the fields very

early in the morning or late in the evening. The contradiction is that it should be dark in order to be less exposed, on the other hand, it is more dangerous to go out in the dark because of the danger of assault. All this leads to constipation and strain on the bladder. The problem gets aggravated during menstruation and pregnancy.

These conditions are so much taken for granted that it is extremely difficult to discuss them at all. It is extremely hard to think of any alternatives. Common toilets in the villages ("WCR toilets", a government programme) never work for lack of maintenance. One also wonders whether it is right to have public toilets for women and men in one cubicle just separated by a wall and with different entrances. If the toilets for women were in one locality and those for men in another, it might work better. Private toilets are entirely absent because of the money investment, water problem and fear of bad smell close to the living place. An experiment with a Gandhian dry toilet by two health workers was also given up. So at the moment, it is very unclear in which direction to go. However, by being able to slowly talk about the problem it becomes clear that the situation is quite unbearable and thus the motivation to tackle it slowly grows.

There are also questions about how to deal with menstruation. Women use old rags for sanitary towels and it should be explored whether it could become an avenue of self-employment to produce cheap sanitary towels at the sewing centre in Kallaru. It was also observed that bathing places for women have vanished over the last ten years due to environmental factors. Generally, the water table in the area has gone down because of bore wells. Many temple tanks have gone dry and others have been reclaimed for agriculture. Even where they still exist, the men are washing lorries in them. So the old custom of women going to the village tank to bathe, wash clothes and chat with each other has been abandoned. This not only undermines cleanliness but also women's solidarity. The question comes up whether the women's organisation can try to create a new place for women where they can wash, bathe, chat and spend some time together.

The Social Roots of Abortion

It transpired in the course of time that abortion is a much more gigantic problem than was evident from the beginning. In a discussion with middle aged and elderly village women it turned out that nearly all of them had experience with abortion, either undergoing them or performing them or both. Abortion is virtually a 'cottage industry'. It is usually carried out with home remedies as eating green papaya, swallowing large quantities of camphor and turmeric. The most widespread and most dangerous method seems to be the use of irakkan chedi (a plant the white blossoms of which are offered at Ganesh chathurthi). A dried yellow leaf of the plant is taken and the stick in the middle of the leaf is taken out and shoved up the birth channel into the uterus. This procedure causes ferocious infection and bleeding and any lead to severe puss formation and even blood poisoning and death. All the same, the method is widespread since it is free of cost and very "reliable" in the sense that the foetus does not survive. Often women have to go in for medical treatment in order to survive.

As far as infanticide is concerned, it remains a pious wish to say that girl babies should be treated equal with male babies. A substantial part of the problem of child mortality is in fact the problem of the morbidity of the social system of patriarchy. At the present moment, it is not yet visible how the women can go beyond discussions towards concrete solutions. The sobriety with which some of them admit infanticide is breathtaking and heartrending at the same time.

The facts of abortion and infanticide again raised the question why family planning is used only by a few. It was recognised in the course of the discussions that "family planning" as such is often resented as a form of government interference in family affairs. It is therefore much more meaningful to discuss the problem as birth control in the overall context of allowing women control over their bodies and over their health. The unpopularity of sterilisations is based on two factors: a) People shun irreversible methods because of child mortality, b) socio-cultural barriers. Men think they lose their "virility" when they get sterilised. They think they will be "weak" and unable to work sufficiently to support the family. There is also a feeling that a woman who has lost her fertility for good is treated with less respect. The problem seems to be that such "loss of respect" does not get compensated by a feeling of having gained control over one's own body because control over sexuality remains entirely with the man and may in fact be more than before. So the humiliation and actual subjugation which may go with operation may make it less acceptable than the risk of having abortions. Though the abortions entail great suffering, they are a matter of woman's own choice at a crucial moment and they are executed entirely among women. Thus, to get away from the abortions can only be achieved by means which would in fact enhance a woman's control over her own body.

Conceptualising Sexuality, Fertility and Male-Female Relationships

A series of 45 posters was made (basically using VHAI slides and *Our Bodies, Ourselves* as models) entirely on the the reproductive cycle, the sexual and reproductive organs, ovulation, fertilisation, pregnancies, the birthing process, cancer detection, sterilisation etc.

This exhibition has advantages over slides in that it can be used without electricity and that women can look at it at their own place. While a slide show just reels off under their eyes, they can go back to earlier posters for clarification, can contemplate them at length if necessary and ask for explanations. It is very important to be able to dwell on the problem at length because the actual embarrassment of facing one's own insides in this way is beyond all measure. Women admitted again and again to have been shocked at what they saw but they also expressed surprises, joy and pride. Even the health worker who explained the posters had to fight her embarrassment and had a tendency to rattle down the information in great haste in order to have done with it as soon as possible. It was later decided to avoid this and to first give the women a chance to react and to ask questions. One old woman objected violently: If women know all this in advance, how will they ever have the courage to get married at all. But young women counter-argued that this would support them to be less ignorant and helpless than before.

The exhibition was first shown in Ulliambakkam to about 50 women of different ages who had come from surrounding as well as far away villages. They were all sangham members. It was later shown to the girls in the Kallary centre who are in the self-employment training and partly in health training. When we discussed the exhibition in these different collectives, we discovered some lacuna in it which were later overcome as a result of these discussions. The 45 posters only dealt with the female body exclusively. It therefore did show tubectomy but not vasectomy.

This had done out of a feminist motivation to come to terms with "our bodies, ourselves". However, it was felt that this approach was not true to reality. The male contribution to pregnancy became visible only in the form of a few sperms, the

most expressive poster of this kind being that of a giant sperm wriggling its way towards the egg ("pampu pole"—"like a snake", as the women said). It was felt that there is surely more to getting pregnant than just that. Why did it seem to be difficult to face and depict this "more"? One underlying problem seems to be the sheer habit of exhibiting, exposing and even dissecting a women's body without great problems, quite in contrast to the actually imposed "modesty" and "shyness" of women. On the other hand, while men uninhibitedly and even shamelessly expose themselves, including their private parts in public while they relieve themselves, there is much more of a tamboo to actually depict a man's body, leave alone his genitals on a poster. This is one reason why we feel so free to dissect a woman's genitals and reproductive organs while we find it difficult to look at a man's penis and testicles with the same kind of detachment. It was therefore felt necessary to depict the man's reproductive system as well and to admit the involvement of the penis in intercourse. It slowly surfaced that there is a need to understand in greater depth the relationship between sexuality and fertility in order to come to terms with the overall problem of birth control and control over a woman's body.

The difficulty in doing this can be easily illustrated by the fact that one of the great revelations to women is the news that they actually have "three holes" i.e. urinary outlet, vagina and anus. Virtually none of the women were aware of this before marriage since there is total taboo on talking about one's body. One young girl said that she thought for a long time that talking to a man and laughing could make a girl pregnant since this was what her parents forbade her to do. Even when giving birth the first time, some women are still confused where the child actually comes out. In the posters, the female genital organs were entirely depicted from the point of view of fertility. The fact that women have a sexual organ of their own in the form of the clitoris which is not related to fertility was felt to be too much of a shock to be disclosed at this stage. The female body is seen entirely in terms of fertility, even as far as woman's own subjectivity is concerned. Women may be "male sex objects" but the question how they could possibly be subject of their sexuality and perhaps enjoy it, is kept out completely. Even women's protest against making women sex objects is often carried out by mobilising values of motherhood and nurturing. Women as sovereign sexual being seem to be unthinkable to women and men alike. However, this is not just a question of a women's general quality of life, it has quite devastating medical implications and at times becomes a question of life and death.

Men, on the other hand, are primarily seen in terms of sexuality, they are first of all sexual beings. The fact that their orgasm is achieved by ejaculation of sperm which make pregnant (while a woman's orgasm is entirely independent of fertility) is generally neglected. Since it is the woman who gets pregnant, fertility is "her" problem. But in fact "her" problem is that sexual satisfaction *in the man* is related to fertility. Precisely this is her actual health hazard. It was therefore felt that an exhibition on the reproductive cycle needs to depict these facts of life in a truthful manner.

Summing up, it can be said that the health work had focus entirely on problems of fertility which was seen as a "women's problem" which had virtually nothing to do with sexuality as far as the woman is concerned. Sexuality only came into the picture in the form of rendering sexual services to men who were seen as sexually starved and needy but had virtually nothing to do with fertility except that, unfortunately, the sexual act does make women pregnant. The task identified was therefore to acknowledge woman as a sexual being, to acknowledge the right to control her own sexuality to acknowledge man's responsibility for fertility which would also establish the necessity to see male sexual needs in relationship to female sexual and other physical needs and to the problems of fertility as a shared problem.

Perceptions of Marriage

These discoveries led to deeper discussions on sexuality and fertility and on thé actually existing patriarchal system of the family. It came out that women, while they see themselves as childbearers and as beasts of burden, most of the time experience sex as one more household chore like fetching water and firewood, cooking and serving food, finally surrendering their own body. These discussions were very interesting because the women felt free to speak out in a large group while at the same time a few of the men animators were also present so that there was a certain amount of interaction between women and men as well. Since men are seen as primarily sexual beings, the assumption seems to be that sex is their birthright and their supreme need, their "full satisfaction" an ultimate goal to which all other considerations have to be subordinated (e.g. refusal to use condoms). In a big meeting with fifty women only two said their husbands used them. On the other hand the sexual satisfaction of the women does not come into the picture. Since the men enjoy sex, they presuppose that women also do so. On the question whether they know what their women feel they said: How can we know, we have no words to talk about "such things". Men were completely taken aback when married young women said that they enjoyed caresses and tenderness while they often hated actual penetration.

Since "full sastifaction" of the man is the supreme value, the women needs to be ever ready. Women are often not allowed to go to night meetings leave alone to seminars which last several days, because they will not be available at home. The women are also frightened that if they do not provide these constant services, the man may shift to another woman and ditch them. Even elderly women face the problem of daily intercourse.

This led to the characterisation of a man's attitude towards marriage as a "facility" (Tamil: vasathi). Men get married when their mothers get too old to cook for them and they expect from it all the services like cooking, washing, health care, childbearing and rearing and sex. The one service they render in return is "protection"(pathukappu) which in fact only becomes necessary because of the general violence against women in society which makes marital rape preferable to the constant danger of indiscriminate sexual use, gang rape and the like.

It seems to be clear that unless woman's right to control their own bodies becomes an accepted human right, the use of contraceptives remains a remote possibility and women may go on for a long time undergoing home made abortions and allow their babies to die of neglect.

Discussions on Menstruation, Pregnancy and Delivery

In the workshop which accompanied the exhibition and which brought out most of the crucial insights which are summed up above, a lot of other information also came to light which, at a closer look, seems to be very much related to the social mechanisms which withhold from a woman control over her own body. All the women believe in seclusion during menstruation. They should not touch foodstuffs (especially pickles), should not go out, should not bathe and put flowers etc. They experience

themselves as impure and weak. They should not use disposable sanitary napkins because if some animal eats these, this will cause the fertilised egg not to settle in the uterus or early miscarriage. If menstruation ceases in a woman due to anaemia (which does happen since anaemia is widespread), this is ascribed to a "spirit". It is also related to the goddess Katteri. When they are pregnant, women are more susceptible to be possessed by spirits. They are also not to cross rivers and should avoid going out. There are the most comprehensive food taboos on pregnant women (on the list of foodstuffs to be avoided are : coconut, mango, papaya, jaggery, raw rice, grapes, bananas, jack-fruit, sweet potato, potato, maize, kambu (a millet), tinai (another millet) and a number of vegetables, including kirai, and eggs). Women are even restricted in their water intake. One really wonders how they keep alive at all with a diet chiefly consisting of rice and virtually nothing else to go with it. The idea is that the placenta may grow too big or that the child will be too big and delivery difficult.

Women are also kept in the dark about delivery. Since they are brought up in the belief that a spirit or a god leaves the child at the doorstep or that the old lady who sells vegetables has brought it along, they find it difficult to envisage the process of delivery even during first pregnancy. Some think the child many come out through vomiting from the mouth, others believe the belly may open underneath the naval. Some believe that the child comes out from the rectum. Some believe that the child comes out piece by piece, hand from hand, eye from eye and then gets assembled. Only three young girls had learned about pregnancy and delivery at school and one girl had got a rather realistic picture by overhearing other women talk about it. While exposures like the poster exhibition go a long way to set such beliefs right, a lot remains to be done to enable women to be in command of their bodies during delivery, by breathing exercise and methods of natural childbirth. It is quite a step to recognise that the pain during labour is due to contractions and that the most efficient way of dealing with it is not to clench one's fists and grind one's teeth while waiting for it to go over, but that there is an active way of combatting the pain by systematic breathing and relaxation. It is envisaged as a future step to go into methods of natural childbirth more systematically. It also remains to be explored to what extent this process can be explained to men and whether men can be involved in deliveries in a supportive way.

It is also important to see these prevailing superstitions about women's bodies during menstruation and pregnancy in the overall perspective of violence against women and oppression through perpetuated ignorance. The tendency sometimes is to ridicule women for their ignorance and superstitions. However, many of these are just an expression of concretely experienced powerlessness and isolation. Nodbody would nowdays easily come forward to blame a Dalit for his belief in untouchability. His mindset will be seen as the product of an oppressive system. Women's minds deserve to be understood in this overall framework as well.

Lessons Drawn

It is certainly not easy to draw clear cut lessons from a learning process as complex as the above described. One definite result is that the participatory research project itself has created more intense involvement and mass participation in the health education. Apart from this, the following observations can be made:

1. Certain contradictions were discovered between different objectives within the health programme, e.g. the activity of making defunct government services available and then dispensing health services rather at random, was in contradiction with the overall approach of using nattu vaittyam, making people subjects in dealing with their bodies instead of making them objects and consumers of treatment.

This is no doubt a very far reaching and complicated problem which can probably not be resolved on the ground of experience within SRED alone. Experiences of a more participatory use of allopathy have to be taken into account and also experience in the use of different systems (like ayurveda, homeopathy, yoga treatments) need to be absorbed.

2. Another contradiction which became visible was between organising and pursuing a very technical, propagandistic approach towards family planning, much along the lines of government programmes. In the course of the research this approach changed completely towards birth control in the context of establishing women's control over their own bodies and their own health, and becoming clearer about the link between sexuality, fertility and social controls.

3. During the change of approach, major changes in language became necessary, e.g. today it will no longer be said that a girl "has been spoilt" if she has been sexually used. Also, the traditional word karparhippy for rape (which means destruction of chastity) has been replaced by balat karama (sexual violence). While it may look surprising that all this should be part of a health programme, it touches deeply upon the underlying assumptions about and attitudes towards a woman's body.

4. It became increasingly clear thay many health problems cannot be tackled without tackling the underlying social root cause. E.g. the prevalence of illicit abortion and occurrence of female infanticide cannot be tackled without making the effort to break male sexual controls over women's bodies and transforming social relations and production relations within the family. Even access to basic hygiene is dependent on this.

5. It was felt that this is indeed quite a frightening perspective because it means overthrowing thousands of years of historical heritage. The question is how this can be done concretely. Some possibilities seem to emerge: (a) The discussion on the relationship between sexuality and fertility as reproduced above and the different impact it makes on the roles of men and women in the family and in society at large needs to be deepened in the women's sangham and among men as well. (b) Methods have to be evolved to help people, women and men alike, to face these new insights and to live with them. Since women in the village as a rule cannot walk out on their husbands, they have to find a way to survive in dignity as also to take a lead to transforming the relationship. Since women are traditional relationship-builders, they have the wealth of a historical heritages to own and to fall back on. Of course, their major objective should not be to redeem men but to learn to live their own lives. All the same, some redemption of man may occur in the process.

Apart from the need to collectively support women (e.g. against wife-beating in concrete cases or by holding seminars on rape, including marital rape), there will also be the need for individual counselling of persons and couples. If such counselling happens in the overall context of building women's movement, agricultural labourers union, health movement and people's science movement, the effects of it will be much more constructive and transforming than the normal opiatic marriage counselling or just technical advice on family planning.

The experience of SRED on the relationship between women's health and the structures of patriarchy in the family and society at large need to be shared with people working in the field but also in the women's movement, people's science movement and other mass movements.

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Politics of Information

rosalie bertell

Recently two US women whose husbands had died of cancer due to radiation exposure filed a suit for damages against the company concerned as well as the United States government. This article, condensed from "Index on Censorship" (14: 5 October, 1985) reports how the US judge assigned to the case subordinated public health and safety to the interests of the government nuclear programmes. Nuclear advocates including scientists and scientific journals have applauded the judgement and have widely circulated it. What is being sought to be overlooked is that the judgement is not only biased but uses false scientific arguments and is full of obvious errors and misstatements.

TWO widows of cancer victims and two survivors of cancer among former employees of the Aircraft Instrument and Development Company (AID Co) brought suit against that company, 23 other companies and the US federal government, which has the ultimate responsibility for regulating industries using radioactive material. This case, cited legally as Johnston vs United States, 597 F. Supp. 374 (D.Kan. 1984), involved a company which purchased instruments with radium-painted dials at salvage for reconditioning. In addition to its regulatory role, the US government was the first owner of the instruments purchased by AID Co. The 23 companies had manufactured and marketed these instruments without warning signs.

The companies involved, after reviewing the plaintiffs' case, the expert testimony and their own defence, decided to settle out of court, jointly awarding $ 400,000 to each of the four plaintiffs. The federal government however, refused to settle out of court and launched a vigorous case defended by a team of seven US Justice Department lawyers in the US District Court for the District of Kansas. The judge was Patrick F. Kelly and there was no jury. After 42 days of testimony (5,509 pages of transcript), Judge Kelly closed the case of Johnston versus US government with a 150-page opinion issued on 15 November 1984, ruling against the plaintiffs and for the government.

The extraordinary aspect of this ruling concerns the use of this case to vilify three expert witnesses called to testify for the workers: Dr Karl Z. Morgan, Dr Carl Johnson and Dr John Gofman. To quote from Judge Kelly's written opinion:

> The paramount and obvious everriding interest (of this case) has been to 'put to rest once and for all, the likes of Drs Gofman, Morgan and Johnson'. . .
>
> The plaintiffs' claims are simply secondary to the interest of the United States.

He expressed the hope that his views of Drs Gofman, Morgan and Johnson would influence other courts in which they are scheduled to appear. On the other hand, Judge Kelly finds the US government's expert witnesses, Drs Maletskos and Auxier's methods 'wholly objective,honest and reliable'. Judge Kelly declared that he believed nothing of plaintiff's expert testimony and *all* of the government's expert testimony. He praised the government's witnesses as 'superb', 'eminent', 'the court's favourite witness', 'a refreshing and wholly qualified witness', 'wholly effective, honest and reliable'. 'brilliant', 'realistic and sound', 'impressive' and 'most convincing'. The opposite remarks were made about Dr Karl Morgan, Dr John Gofman and Dr Carl Johnson.

Judge Kelly's conclusions do not merely pose a question of unrestrained character defamation. They also represent a break with previous US court cases dealing with exposure to ionising radiation. Judge Kelly failed to quote or append to his ruling any previous court rulings, even the recent Colorado, Utah and Pennsylvania court decisions in which radiation injury settlements were awarded. In these cases the expert witnesses produced by the government failed to convince the court that exposure to ionising radiation at low levels was harmless.

Nuclear advocates have widely distrubuted Judge Kelly's conclusions. Both Cliff Goff and Dr Michael Fox, workers at the Hanford nuclear facility (a US weapon factory complex), have used it as the basis for letters-to-the-editor attacks on reporters who have quoted Dr John Gofman. Dr Sidney Marks of Battelle Northwest Laboratories—a former Atomic Energy Commission official who has tried to suppress the findings of excess cancer among Hanford workers as reported by Drs Thomas Mancuso, Alice Stewart and George Kneale—has handed reporter Karen Dorn Steele an underlined copy of the Kelly opinion. The February 1985 issue of *Nuclear News* contained an uncritical summary of the judge's opinion with no reference to the underlying scientific debate or issues in question. The magazine has never carried stories on the praise given these same scientists in other court cases.

The April 1985 *Newsletter* of the Health Physics Society contained the first article of a four part series called: 'Highlights from the Decision of Judge Patrick F. Kelly in the case of Johnson vs United States', by John R. Horan, former Chief of Radiological Safety, International Automic Energy Commission (retired 1983). This lead article gives some background to the Kansas event mentioning the case previously lost by the US government, the more than 4,000 lawsuits pending against the United States alone, and the 1979 decision of the US Department of Justice to devote 'the necessary time and effort to developing a team of specialised lawyers with the requisite scientific background and expertise'. It was this specially developed team which the US government used to fight the two widows and two surviving cancer victims and 'discredit' their expert witnesses in the Kansas court room.

This is an extraordinary way to conduct science. The first three pages of the Health Physics *Newsletter* contain nothing but exerpts from the Kelly opinion, without allusion to even one piece of scientific evidence or interpretation disputed before his court. Unless the readers had access to the 5,409 pages of trial transcripts they would have no way to test Judge Kelly's opinion on the health effects of radiation against their own opinions. Similar excerpted vignettes from the Kelly opinion have been duplicated by General Public Utilities, the company responsible for the Three Mile Island reactor accident, on 20 x 20 inch posters and sent all over the world.

What Is 'Safe'?

This extraordinary personal attack on three US scientists calls us to a serious study of its motivation. It requires, at the very least, a reflection on the basic scientific issues 'settled' by the court. The passing off of a judge's opinion which apparently endorses the nuclear industry and censures its critics, without issue discussion is unprofessional, to say the least. Never before have scientists appeared so needy of praise from a non-scientist as the nuclear community exhibits in this instance.

First let us look at Judge Kelly's logic. He repeatedly extols the Biological Effects of Ionising Radiation Committee (BEIR) of the US National Academy of Science as the 'world's irrefutable experts'. Although the BEIR committee states that

a 0.5 rem radiation dose to the general public yearly will result in 6 per cent cancer increase, 0.6 per cent increase in birth defects and a 15 per cent increase in ill health, Judge Kelly concludes to the contrary that there is no evidence leading one to expect radiation injury at exposures less than 50 rads (this is comparable to 50 rem). He states that even 72 rads may be safe. This conclusion of the court was not quoted in the Health Physics *Newsletter* or the other nuclear public relations material. The judge's notion of 'safe' is not clear, but certainly most persons in the Health Physics community would find even 0.5 rem per year to the general public 'not safe'. Judge Kelly's opinion (that allowing such high exposures carries no risk, is the 'international consensus among experts') is quite false.

Judge Kelly's preferred experts pronounced 40,000 picocuries of plutonium and americium a 'safe' body burden for atomic workers. In contrast, a US Department of Energy study showed a 33 per cent increase in chromosome damage among workers receiving 400 to 4,000 picocuries body burden. These studies of workers have also shown excess brain, lung, central nervous system and digestive system cancers, and leukemia (see *New Scientist*, 11 October 1984). Judge Kelly wrote: 'The four plaintiffs in this case have had numerous whole body counts (of radioactivity), each reported as negative, and which conclusively prove that they have no radium in their bodies.' This is in direct contradiction of the trial Exhibit No 12, 148, showing that the plaintiffs had whole body counts, performed by Helgerson Nuclear Services, which were between 132 and 330 times normal. The judge apparently confused the radium dial painters' exposure and the exposure of the plaintiffs to the hardened, flaked radium dust 10 to 20 years later. The GI tract uptake for the water soluble radium paint would have been much higher, and incorporation of radium in bone for dial painters was detectable with whole body scans. Three of the four plaintiffs were exposed primarily to inhaled radon gases and its decay products, not to radium. One plaintiff had cancer of the colon. For these types of exposure there is no expectation of finding radium, the precursor of radon gas, in bone. These facts were not conveyed to the Health Physics audiences.

The company at which the plaintiffs worked had dubious radiation safety practices. A letter from Mr Gaughan, Radiation Officer to Mr Fulks, Manager of Aircraft Instruments Development (AID Co) was also submitted to the court as evidence. The four workers with cancer had never been warned of the hazards of radium dials and pointers of the instruments they were re-conditioning or the dubious safety record of the plant. A US Occupational Safety and Health Administration inspection of the AID Co reported readings up to 100 mR/hr (a reading which would be normal for a year but not an hour) and over 2 million counts per minute (2 to 25 counts would be considered normal). It was only after the plant had operated for over 15 years that it first purchased an instrument capable

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of measuring the beta and gamma radiation to which workers were exposed. It never possessed instruments for measuring the radon gas released continuously from the radium which was the principal hazard in the plant. The plant had received numerous complaints from the Kansas Department of Health and Environment because of its lack of radiation protection and the high levels of contamination throughout the plant. None of this worried Judge Kelly. None of this was reported to the Health Physics or nuclear establishment audiences.

The risk coefficients for cancer were another point of contention in the trial. Dr Karl Morgan was criticised for 'inflating' the predicted number of cancers. Dr Morgan had doubled the BEIR III estimates, a practice now accepted by Seymore Jablon, US National Research Council, and Dr Edward Radford currently correcting the atomic bomb survivor data on which the BEIR III estimates are based. On the other hand, Judge Kelly accepted the dose estimates for the plaintiffs calculated by Dr John Auxier, the person most responsible for the errors of dose calculation in the atomic bomb data (*Science* Vol 12, 22 May 1981). Since Dr Morgan made only a correction of 2 on the BEIR II cancer risk estimates, and did not use the added correction factor of 2 to 3 for conversion from absolute to relative risk, his cancer estimates would be generally considered conservative, ie too low, by most radiobiologists.

Justified Lying

The 'court's favourite witness', Dr Lauriston Taylor, perhaps gives us the best clue to understanding why the US specially prepared legal team was sent to Kansas to defend an obviously poorly run second-hand aviation instrument factory against the cancer death claims of two widows. He helps to situate the verbal attacks on the three scientists who tried to assist the court in coming to a verdict within the overall US predicament. Dr Taylor was quoted on Seattle television in February 1985, by Dr Richard Rappaport, president of the Seattle Physicians for Social Responsibility, as having said that lying to the public about nuclear matters is sometimes justified. As reported in the recently released minutes of the US National Advisory Committee on Radiation, 10 November 1958, Dr Taylor participated in the cover-up of a fall-out episode in Los Angeles caused by a nuclear test at the Nevada Test Site. The accident was described by Dr Edward B. Lewis of the California Institute of Technology as a 'really serious episode. We measured hot spots of about 2 mR/hr on the roof of our building and 2 mR/hr on our shoes... The real hazard is the inhalation of these in the lungs'. These exposures were much lower than those experienced by the deceased workers. In spite of the danger to the public, Dr Lauriston Taylor urged that the public be assured that all was well. In the 1958 minutes, Dr Taylor was quoted as having said that in order to actually protect the public from genetic damage 'you will have to talk about values set down by one hundredth or more'. He stressed that 'if you ever let these numbers get out to the public you have had it'. Birth defect rates have doubled in the US over the past 25 years according to a recent *New York Times* special report, but Judge Kelly wrote:

> This court finds that sincere and eminent scientists, like Dr Taylor, who have constituted the radiation protection community for over a half a century, have carefully studied all known literature on the carcinogenic potential of radiation and have set safety standards that were not expected to cause bodily injury during the lifetime of exposed individuals.

Just as Lauriston Taylor avoided public disclosure in the Los Angeles fall-out episode to safeguard the US nuclear weapon testing programme, so perhaps Judge Kelly found similar reasons to cause him to conclude that 'the plaintiffs' claims are simply secondary to the interests of the United States'. Those interests are the same in 1985 as they were in 1958, namely to convince people (however wrongly) that exposure to low level radiation causes no harm. Thus the American people will be willing to handle the uranium, run the nuclear reactors, separate out the plutonium, fabricate and test the bombs, and tolerate the radioactive debris from each part of the weapon cycle. The victims of this deception must be ignored because of the greater 'good' of national security in a nuclear age.

Although the Judge made many obvious errors and misstatements, these were not reported either in Donald Jose's letter, the Health Physics *Newsletter*, or the nuclear public relations material. The Judge referred to autoradiographs as audiographs; called the inverse square law the immense square law; thought MeV was a unit of power whereas it is a unit of energy; described alpha rays as bombarding tissues in millicuries per second; and said that electrons gave off daughter products. In a still more serious error, he claimed that there were no epidemiological studies or findings to support occurrence of cancer at radiation exposure levels below 50 rad.

The government lawyers used some rather crude tricks to convince the Judge that the radium handled by AID Co employees was harmless. They brought the dials into court and had Dr Robley Evans explain radiation threshold theory which was scientifically discredited in the late 1960s. This false theory led to an estimated 1100 excess lung cancer deaths among US uranium miners. They also brought into court a camping mantle whose beta emissions caused impressive clicks on a geiger counter. They failed to make available to the Judge the US Nuclear Regulatory Report No NU REG/GR-1910 , ORNL-5815, 1981, 'An Assessment of Radiation Doses from Incandescent Gas Mantles that Contain Thorium', which assessed the hazards of occasional use of such mantles. These two court-room demonstrations were used to minimise the years of work by the plaintiffs under unsafe radiological conditions at the AID Co plant. A special committee has been appointed to develop cancer risk assessment tables to estimate the probability that a particular cancer is attributable to radiation given the victim's age, sex, cancer type and radiation exposure dose.

The six-person committee is composed of three of the government's expert witnesses who testified against the plaintiffs who had lived downwind of the Nevada nuclear test site and who had contracted cancer. The government lost this lawsuit in Utah. None of the experts who testified on behalf of the persons exposed to fallout were asked to be on the Risk Assessment committee. None of the scientists who have published research papers on the cancer effects of low-level radiation were invited to sit on the committee. It is expected that the government will settle the 'scientific dispute' its own way—by legislative decree. This new tool will add to the effectiveness of the legal team with its scientific disinformation.

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September 1986: Volume III No 2: Primary Health Care

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Why don't you write for us?

This periodical is a collective effort of many individuals active or interested in the field of health or interested in health issues. The chief aim of the journal is to provide a forum for exchange of ideas and for generating a debate on practical and theoretical issues in health from a **radical or marxist** perspective. We believe that only through such interaction can a coherent radical and marxist critique of health and health care be evolved.

Each issue of the journal highlights one theme, but it also publishes (i) Discussions on articles published in earlier issues (ii) Commentaries, reports, shorter contributions outside the main theme.

Our forthcoming issues will focus on: Health Care in Post-Revolutionary Societies, Primary Health Care, and Medical Technology.

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our love of life,
and the worries
about our children
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we face when
they screw us open
to paint our uterus
from the inside
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the needles poked in,
the tubes inserted,
the bloodstained pads
the fact that
we will never be
the same again
making love.
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grateful to them
for the tortures
inflicted
for they save
our lives
and we wonder
how they can live
doing this
every day.

—Gabriele Dietrich
January 1986
Bangalore

The poem in the issue II:3 was by **Sachidanandan**. *We regret the omission.*

Vol. II No. 1

HEALTH CARE IN POST-REVOLUTIONARY SOCIETIES

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Issues in 'Post-Revolutionary' Health Care

HEALTH care system and the health status of the people, like all the other aspects of social life, have undergone tremendous changes in those societies where the rule of capital has been challenged in a revolutionary fashion by the toiling masses. The class nature of the forces that led the revolution or of those which rule these societies at present, may be controversial, the direction taken by these societies after the revolution may be criticised, but the fact that there have been dramatic improvements in the health status of the people of these societies following the revolution cannot be denied. Conventional health indicators have shown amazingly rapid improvement (as compared to capitalist societies of comparable size, population and levels of development) in the USSR, China, Vietnam, Nicaragua, Mozambique and the East European countries. These societies are being categorised here as post-revolutionary (PR) societies. (We use the term 'Post-revolutionary' rather simplistically in place of the more controversial 'socialist', though we are aware that the use of this term too, is not free of problems.)

Several features distinguish the health care systems of the PR societies from those of the capitalist societies. They include, public ownership of health care institutions and allied industries like the pharmaceutical industry, the near absence of privatised medical care, free or heavily subsidised health care, rationalisation of health care delivery, strong emphasis on the promotive and preventive aspects, disease control by mass action rather than by biomedical interventions alone, decentralised control, integration of traditional systems and their practitioners into the existing delivery system and so on. Not that all of these could be found in any one or all of these societies. For instance, emphasis on decentralised control and self-reliance at the local level prevailing in China may not be found elsewhere (Sidel and Sidel, 1982). But one or more of these are generally to be found in the health care systems in all the PR societies.

Rapid changes in conventional health indicators characterised by steep falls in infant mortality rates; reduction in morbidity due to infections like tuberculosis, malaria, schistosomiasis and Sexually Transmitted Diseases (Sigerist, 1947; Alderguia and Alderguia, 1983; Quinn, 1973) and reduction in population growth rates cummulatively point to the improvements in the health status of the people. They have been brought about no doubt, as a result of better nutrition, sanitation and hygiene, easy availability of sale drinking water, improvements in housing, improved facilities for women (as compared to those in the capitalist countries), better medical care as well as better work environment indicated by more stringent environmental and industrial safety standards (Derr *et al*, 1982). The two most important factors responsible for these improvements, can be identified.

Rapid Modernisation and Abolition of Absolute Poverty: Though not a uniform phenomenon in all the PR societies, this has been the most important factor in improving the health of the people. This was made possible as a result of the defeat of the old bougeoisie and their allies in these societies. Now, whether the ensuing modernisation was 'socialist modernisation' as envisaed by Marx or not is a moot point. Similar quantitative improvements have also been seen in the advanced capitalist societies during the 19th and early 20th centuries and therefore, they by themselves cannot be said to be the characteristics of 'socialist' nature of modernisation in PR societies. Still, in the process, these societies were indeed able to meet the basic requirements of food, clothing, shelter and medical care of all the people, irrespective of their incomes and thus therefore, resulted in a healthier population.

Better Access to Medical Services: Medical services being by and large free and extensive, are easily accessible to most people. One's economic position does not prevent one from availing oneself of the best medical care available. This has indeed affected morbidity and mortality patterns in the PR societies.

But whether the health care structure that has emerged is really democratic and 'socialistic', operated by the working class possessing the necessary skills and knowledge is a debatable issue. There are indications to show that it is not. There are strong tendencies towards professionalism and technocratic control. One also needs to assess whether or not a sexist bias against women exists in the field of health care and medicine. Therefore, it is not adequate to apply only the conventional health criteria to assess the nature of the health care system and the health status in societies generally recognised to be different from capitalist societies. More sensitive indicators like comparisons of differences brought about in health and disease patterns in USA and USSR (or India and China), wage differentials among medical and health personnel, the proportion of women occupying high positions, the extent of homogenisation (narrowing down of sex, race, class, occupational and regional differences of health and disease indices) and so on need to be applied. Only such characteristics can differentiate a developed 'socialist' pattern of health care from that of a developed capitalist society. Whether the health care systems in PR societies has indeed reached such a stage is an issue requiring much analysis and discussion.

While noting the positive aspects of health and health care in the PR societies, one cannot fail to take note of several features which raise vital issues regarding the nature of health care in these societies, having wider implications outside the field of health and medicine.

It is noticed that indicators like life expectancy at birth, IMR and others have reached a plateau and are even regressing.

Also, a tendency towards overmortality of males over females is noticed (*International Journal of Health Services*, 1983; Gidadhubli, 1983) due to steep increase in cardiovascular diseases, cancer and accidental deaths. A similar phenomenon is noticed in the advanced capitalist societies also (see Doyal with Pennel, 1983). These diseases have been associated with over consumption, stress and other environmental factors. Whether high incidences of such diseases signify a life-style and an environment resembling those in the advanced capitalist societies or not is a question that needs to be resolved.

In the USSR, an increasing concern is being felt about the rise in alcoholism. Various legal and administrative measures have been initiated to curb this problem (Lindgren, 1985) Alcoholism is associated with psychosocial stresses. Under capitalism, besides other factors, a lack of creative pleasure in work, leads an individual to avenues of superficial pleasures. Alcohol is one of them. Is a similar process still at work on an increasing scale in PR society like USSR? This

rather uncomfortable question needs to be faced squarely in order to comprehend the real nature of the processes affecting the psychosocial health of the people in these societies. Another related indicator reflecting the sociopsychological disharmony is the incidence of mental disorders and suicides.

Though quantitative indicators of health do give an idea about the health status of a society, but it does not give the total picture. It can be shown that early development of capitalism also produced improvements in the quantitative indicators of health care. What it did not improve was the quality of health care: doctor-patient relationship has become depersonalised, the aged are marginalised; the mentally sick are heavily drugged and dehumanised. What is the situation in the PR societies? How and how much different is the quality of care to the sick, the aged, the minorities, the women and the mentally sick from those in the capitalist societies? What one finds would point to what could well be an important differentiating feature of a 'socialist' health care system.

In a capitalist society, medicine reflects and reinforces the bourgeois ideology. Thus, a disease is reduced to a biological phenomenon, ignoring the role-often a determining one-of social, economic and cultural factors in its causation. Such a view justifies the use of biomedical interventions causing a growth in the demand for industries producing the required technological inputs. On the other hand, the hierarchical relationships in the medical field amongst the medical personnel, between doctors and patients-reflects the bourgeois ideology of class, race and sex dominance. Now in the PR societies, how do health planners, doctors as well as people view health and disease. How are the relationships amongst various health personnel? These are questions of vital importance that should be resolved while assessing the health care systems of PR societies.

There have been disturbing reports of dissidents in PR societies being labelled as 'behavioural deviants' and of use of psychotropic drugs to bring about behavioural conformity. This is a blatant example of the use of ideology in medicine to serve the political needs of a class or a group by converting an essentially political issue into a medical problem. What are the compulsions that such practices persist in PR societies is also an issue related to the question of ideology in medicine in PR societies.

In some countries like Poland for instance, chronic shortages of drugs, equipments and staff are reported. (*International Journal of Health Services*, 1983) Now whether this shortage is real, that is as related to the needs of the people or false that is as related to the needs of the socially more powerful medical profession remains to be seen. A false shortage could be felt if there is a tendency towards overmedicalisation of life; by replacing community level health care personnels and paramedics by doctors; by the demands of doctors for more technological inputs of doubtful value and so on. If the shortages are indeed real, a study of the underlying socio-economic processes could reveal much about not only the health care scene of the society but also about the problems of 'socialist' reconstruction during the PR period.

Towards a Dialectical Understanding

Now, the causes of these problems and the underlying processes can only be understood in the context of the prevailing social and economic conditions of the existing social formation. An analysis of these problems brings us to the very crucial question of the relationship of a social formation and substructures thereof. Though developments in health and health care systems come under the influence of socio-economic factors in movement—that is of history—this relationship is not one -to-one and deterministic. It is a highly complex relationship of mutually dependant dialectical interactions. And therefore, each problem has to be understood within its specific historical and social context.

Thus, while studying health and health care in any social formation, one important point needs to be kept in mind. A 'socialist' health care system develops in the historical context of the process of 'revolution' and thus carries with it the stamp of the specific processes of the society with all their contradictions. Neglecting this aspect may lead one to an incorrect understanding of these societies as well as their health situations (Segall, 1983). One may be led to a narrow empiricist position; a position which adopts a static view of social structures and considers the health care system existing in a society as directly reflecting its socio-economic processes. Taking an isolated view of the events that went into making up the health care system in a PR 'Socialist' country, this position labels whatever exists there as being 'Socialistic' in nature. On the other hand, it may also lead one to take an idealist view constructing an abstract 'Socialist' model of health care devoid of any socio-historial context. Various characteristics are ascribed to such a model. Out of these, which constitute the necessary and the sufficient conditions for a 'Socialist' health care system are unspecified. Therefore, mere absence of a few characteristics of this idealised model, in an imperfect concrete health care system, full of contradictory tendencies of a PR society, leads one to label it 'non-socialistic'. Worse still, it denies the possibility of waging struggles to incorporate some of these feature into the health care systems of capitalist societies.

It would not be entirely out of place here to mention a related problematic of the role of struggles in a capitalist society to imparting to the health care system, some of the 'Socialist' characters. Whether a movement for greater social control over health care services and allied industries is a movement towadrs a 'revolutionary' health care system or not is a crucial question for those fighting for fundmental social changes. One exteme view, might see such a struggle itself as a revolutionary movement thereby overlooking the overall persepctive of such a system. On the other hand, an equally extreme view may call such a movement as 'reformist' as it does not touch the root-cause, thereby overlooking the vital importance of stages in the movement for 'revolutionary' health care. Several other factors like the leadership, mass mobilisation, methods used for raising people's awareness, modes of organisation and struggles also need to be assessed before making any judgment. A thorough analysis of the inter relationship of a health care system and a social formation would go a long way to resolve a constant dilemma faced by those involved in such struggles.

* * *

In this issue: Amar Jesani writes about the problems and process affecting health in Nicaragua; Malini Karkal discusses the population policy in China and Padma Prakash draws attention to the changes brought about in the health care system in Mozambique after 1975. Bob Deacon's reprinted article raises relevant issues regarding health and health care in the three post-revolutionary societies, Soviet Union, Hungary and Poland. And we introduce 'Update' a section for reports, notes and comments.

—dhruv mankad

(References: see p 39)

Health in Nicaragua

Epidemiology of Aggression

amar jesani

Though the Nicaraguan revolution is still fighting for survival against escalating US aggression, it has ushered in far-reaching changes in the field of health and health care. These changes are examined in this paper. The author refers to the role health workers played in the Nicaraguan revolution and discusses the post-revolutionary reforms introduced in the health care system and the consequences of US imperialism's continuing war against Nicaragua for the people's health. Health professionals, the author argues, will have to understand the epidemiology of war better since the world is likely to witness more revolutionary upheavals and crises as well as imperialist aggressions.

A QUARTER of a century ago, the victory of the socialist revolution in Cuba, till then the so-called backyard of the US imperialism, generated a new wave of revolutionary movements, not only in the Carribean basin, Central America and Latin America, but all over the world. The revolutions in Grenada (March 1979) and Nicaragua (July 1979) widened the breach opened in the imperialist empire by the Cuban and Indochinese revolutions. The revolution in Grenada was, however, crushed by US imperialism before the whole process could completely unfold and get fully consolidated. The revolution in Grenada nevertheless inaugurated changes in the health and health care system of that country, though it is beyond the scope of this article to deal with them. Also, the information available to us is very fragmentary to allow us to discuss the changes in detail. On the other hand, although the Nicaraguan revolution is still fighting for its survival against escalating US aggression, it has unleashed far more profound changes in all aspects of people's social life, including in the field of health and health care, enabling us to examine them in considerable detail

There are few regions which have been so much the object of the foreign policy of an imperialist power as Central America and the Carribean. It has been the theatre for permanent US intervention for 85 years. The US has always claimed the right to lay down the law there. It considers this whole region to be an integral part of its 'defence system' and has 40 to 50 military bases there and is building many new ones. In 1982-83, 20 per cent of entire US military budget was earmarked for this region. Behind this military involvement is the US economic interest in the area which is a major communications and trade route as well as a great raw material reserve and source of cheap labour power in the international division of labour (Fourth International, 1985, p 89). This is the reason why the countries in this region are kept strictly subordinated to imperialism to such an extent that the political regimes there are 'created' by the US.

The super-exploitation of people there by imperialism has led to deterioration of living standards to abysmal levels, extreme poverty, unemployment, and so on. The resistance to this exploitation has also grown so much so that people are in a state of permanent war with the military state machines. The health consequences of this continuous war are far-reaching, to the extent that the health professionals are suddenly required to scientifically understand the health consequences of war or the epidemiology of war and agression.

Nicaraguan Revolution: Historical Background

The Subjugation: Nicaragua, like other parts of Central America, was conquered in 1523 by the Spaniards and they subjugated the Chorotec Indians of the Aztec family. It become a centre for slave trade for more then three centuries under Spanish rule. It attained "independence" in 1821 and slavery was abolished in 1824 (Weber, 1981, pp 1-5). Ever since its "discovery" Nicaragua has always been of interest to the great powers. The US has militarily intervened in Nicaragua at least three times.

The first US armed intervention took place in the mid-nineteenth century at the time of California gold rush. This intervention, though short-lived, opened a way for US financial and political interests which, in the course of half a century, converted Nicragua into a coffee exporting country with a plantation economy. Coffee constituted 50 per cent of the value of Nicaraguan exports till the cotton boom of the 1950s. All exports were chiefly to the US. The second US intervention took place in 1909 and US forces continued to occupy the country from 1909 to 1925. When the US withdrew its forces in 1925 it thought that the regime backed by it would survive, but the rebellion against the puppet regime led to the third US intervention within months after the withdrawal. This time the US continued to occupy Nicaragua till 1933.

During this third intervention, the US helped create a military force, called the National Guard, in 1927. The National Guard was at the beginning commanded, equipped, trained and financed by the US. The chief of the National Guard, Anastaslo Somoza Gracia, seized power in 1936 and established a US backed family dictatorship lasting for almost fifty years (Weissberg, 1981). Under Somoza, Nicaragua acted like a true puppet of the US and, through the National Guard, provided counter-revolutionary military forces during the 1954 attack on the progressive Arbenz regime in Guatemala (which incidentally, profoundly politicised a doctor, Ernesto 'Che' Guevara, who subsequently led the Cuban revolution with Fidel Castro) and during the 1965 offensive in the Dominican Repubic. It was from Nicaragua, moreover, that the CIA mercenaries left for the 1961 Bay of Pigs landing in Cuba, the most concerted (albeit unsuccessful) US attempt to destory the Cuban revolution (Weber, 1981, p 30).

The Revolution: The third US intervention in 1925-26 inspired a nationalist uprising led by general Augusto Cesar Sandino. The war of resistance, fought on the lines of guerilla warfare, lasted till the murder of Sandino on 21st February, 1934. But it helped in radicalising many individuals who had been also influenced by the October Revolution. The 1959 Cuban revolution gave the struggle in Nicaragua further impetus and in 1962 the *Frente Sandinista de Liberacion Nacional* (Sandinista National Liberation Front, FSLN) was formed. The FSLN combined guerilla military warfare and rural and urban mass organisation and mobilisation for 18 years to lead the revolutionary insurrection on 19th July, 1979 that overthrew the Somoza regime, destroyed the erstwhile state power and created a completely new state apparatus under the leaderhip of the FSLN. It is under the leadership of the FSLN that the reconstruction of the Nicaraguan society is under way.

Before we take up discussion of the changes in the Nicaraguan health services after the revolution, it would be useful to know what role the health functionaries played in the revolution, although this aspect of the revolutionary movement is not very well documented. While the health care services have long been deficient in the Central American region, doctors, medical students and other health functionaries have participated in and even led struggles for social reform. Some examples can be given easily. Che Guevara in Guatemala, Calderon in Costa Rica, Romero and Castillo in El-Salvador, Bolanos and Rosales in Nicaragua and Morales and Alvarado in Honduras led political movements and governmental efforts toward the establishment of social security systems, workmen's compensation, the legalisation of unions, and agricultural reform (Garfield and Rodrigues, 1985). In Nicaragua, besides the above-mentioned doctors, reference can be made to a hunger strike by the health workers in the capital, Managua, in January 1979, in protest against the killing of dozens of people participating in a gigantic demonstration to mark the first anniversary of the assassination of Pedro Joaquin Chamarro, an anti-Somoza editor of the bourgeois paper *La Prensa* (Weber, 1981 p 4).

Post Revolutionary Health Services Reforms

Basic Principles

Nineteen days after the victory of the Nicaraguan revolution the new government issued a declaration outlining the basic principles of the new health care system. These principles are:

1 Health shall be a right of everyone;
2 Health services will be a responsibility of government;
3 The public will participate in health policy determination at all levels and
4 All health services will be planned on a regionalised, systematic basis, (Braveman and Roemer, 1985).

Special emphasis within the new system was put on maternal and child health, occupational health, and primary health care for everyone. To overcome the deficiency in the availability of health personnel, high priority was also given to producing them in much greater number and in a new mould.

Further, it should be kept in mind that these principles and new health care planning were inaugurated in the context of the thorough-going revolutionary reforms started in the entire social structure. The way the FSLN has introduced agrarian reforms, which undoubtedly have helped in improving the health status of the people will illustrate this point.

In July 1981, the first agrarian law was enacted which made it possible to confiscate land left lying fallow by owners holding 350 hectares or more of land on the Pacific Coast and 750 hectares or more on the Atlantic Coast. Another law enacted in early 1986 removed these limits of 350 and 750 hectares and has made it possible to confiscate land of all big landowners who do not plan for efficient production (Udry, 1986). The effects of these reforms can be seen in the fact that in 1978, 36.1 per cent of land was owned by those with more than 350 hectares, whereas they now (in 1984) own less than 11.3 per cent. The owners of more than 150 hectares of worked land, who possessed more than 50 per cent of the land in 1978, now have no more than 23.8 per cent. The land distribution has been carried through briskly. In the first fourteen months of the agrarian reform, the average rate of granting property titles was 647 per month, and the area of land involved was on average 15 hectares per family. In addition to the distribution of land for private cultivation, 38 per cent of land is under state ownership (APP 19.3 per cent) and co-operatives (10 per cent in Service Co-operatives, CCS and 8.7 per cent in Sandinista Agricultural Co-operatives, CAS) (Devilliers, 1984).

The contribution of these reforms to the improvement of the health status of the people cannot be underestimated, especially in a country which has a predominantly agricultural economy. Otherwise mere changes and improvements in health care delivery cannot achieve in seven years only, the tremendous improvement in the health status of the people. In short, what we are arguing for is not only that a revolutionary regime should seriously undertake thorough-going redistribution of wealth, but also that in order to make health a fundamental right of the people, people must be given the basic right over the means of production and the result of their productive labor power.

People's Participation

Another basic principle of the health services in Nicaragua is people's participation "in health policy determination at all levels". This term, 'Peoples Participation' is so much abused, particularly in the field of community health, that it must be put in a proper perspective in the context of Nicaragua. Fundamental to our understanding of people's participation is people's power—political and economic power in the hands of the working people, mediated through their own mass organisation and having decisive say in decision-making. Only if such people's power is existing can it get permeated in genuine participation of people in health care. Therefore, we must examine in brief whether these necessary pre-conditions for the genuine participation of the people, as envisaged in the basic principles, exist in Nicaragua.

The revolution in one stroke destroyed the essential part of the bourgeois state apparatus—its repressive forces—and created a new revolutionary army, called the Sandinista

People's Army (EPS), whose origin, composition, leadership structure and training was a *direct result* of the revolutionary struggle. The original police force was smashed and the Sandinista police was set up from working class fighters, thrown into unemployment because of war damage to the economy. In February 1980, the Sandinista People's Militia (MPS) was formed by arming tens of thousands of workers and poor peasants. The Sandinista Defence Committees (CDS) are another organised structure of the armed working people for their self-defence. While the EPS and the Sandinista police are part of the organised state structure, the MPS and the CDS are made of working people. The point to be noted is that the defence of the nation and exercise of power are not the functions of the state apparatus alone, but also of the armed volunteers from the urban and rural proletariat and the peasants. While discharging their duty as workers and peasants, the working people wield arms to fight against any attempt to take back the gains of the revolution. Therefore, even though the ruling classes are not completely expropriated—they continue to hold substantial economic power under the mixed economy—their *political* power is completely expropriated and any refusal by them to go along with the decisions taken by the revolutionary government is met with further expropriation, thereby deepening the revolution and consolidating the dictatorship of the proletariat.

Now let us see how these armed workers and peasants and even those who are not armed but come from the same classes have set up their mass and class organisations. We will mention five of them here: (1) the Sandinista Workers Confederation (CST) and (2) the Associaton of Rural Workers (ATC). The CST and the ATC are trade union organisations representing about 75 per cent of urban and rural wage workers. They provide an organic link by their constant cooperation and thus materialising the workers and peasants alliance. (3) The National Union of Farmers and Ranchers/Stock Rearers (UNAG) (4) The Luisa Amanda Espinoza Associationof Nicaraguan Women (AMLAE) (5) The 19th July Sandinista Youth (JS 19) (Udry, 1985).

The Sandinista democracy rests in the first instance on these mass organisations. Their power is not subordinated to any other abstract concepts. Further, although the FSLN commands political hegemony on the working people, it has not brought the Nicaraguan society under one party straitjacket. Instead, at the larger level it has opted for political pluralism and has legally allowed all political parties, both bourgeois and working class to operate, however, within the framework of new realities. In November 1984 elections, the opposition got 30 per cent of votes. This shows that Nicaragua has opted for a different type of political structure by allowing all political ideas to contend for hegemony within the dictatorship of proletariat and has thus chosen to face up to a series of problem that are relatively new in the history of the transition to socialism.

This is why a worker and a farmer in Nicaragua is not only a worker or a farmer, but also an armed defender of revolution, a soldier, and some of them even health workers and/or leaders of their mass and class organisations. Thus, the people's participation in health care is *an integral part* of people's participation and control over all the socio-economic processes in the Nicaraguan society.

Health Care under Somoza

Nicaragua is one of the poorest countries in the region with a population of thirty lakhs. In addition to poverty, illiteracy and ill-health, it faces a severe problem of structural unemployment. This is illustrated by the fact that the entire work force in Nicaragua grew only 6 per cent from 1961 to 1971. While the population aged 15 to 64 years grew by 40 per cent in the same period. This led to massive urbanisation with a large proportion of the population living in shantytowns (slums) on the edge of major cities. Roughly one-third (ten lakhs) of the country's total population is concentrated in its capital, Managua. This is one of the reasons why Nicaragua has 55 per cent of urban population despite the central role played by agriculture in its economy (Garfield and Rodriguez, 1985); 35 per cent of urban and 95 per cent of rural population lacked access to potable water (Halperin and Garfield, 1982).

As in any underdeveloped capitalist country, the official health statistics of pre-1979 Nicaragua are highly unreliable. Halperin and Garfield (1982) point out that "the Somoza regime paid so little attention to health matters that even such basic data as birth and death certificates were collected for only about 25 per cent of the population". The official estimate of the Infant Mortality Rate (IMR) was given as 35 per 1000 live births and was reported so in one of the WHO documents of 1980. A survey conducted in a part of rural Nicaragua in 1977, however, showed that the IMR in the sample population corresponded to an IMR of the order of 150 per 1000 live births (Heiby, 1981). Life expectancy at brith was 52.9 years. Indeed, Nicaragua had the lowest life expectancy at birth and one of the highest levels of the IMR in the region.

Malaria was a major public health hazard. Upto 60 per cent of the Nicaragua population had malaria during the 1930s. From 1934 to 1948, 22.4 per cent of all registered deaths were due to malaria. Upto 70 per cent of hospital beds were occupied by malaria patients during epidemics (Garfield and Vermund, 1983). The national malaria control programme was started in 1947 and was converted into an eradication programme, keeping with the change effected internationally at the behest of international agencies. According to Halperin and Garfield (1982), one-third of the people contracted malaria at least once in their lives. One of the important reasons for this high incidence of malaria was the indiscriminate use of insecticides in cotton and rice farming, leading to the Anopheles mosquito vector exhibiting resistance to all insecticides in common use, including DDT (dicophane), diedrin, malathion, propoxur and chlorofoxin. As a result in 1978 approximately 4.4 persons per 1,000 contracted this disease. The revolutionary civil war paralysed the health services and the incidence of malaria rose to 7.3 per 1,000 in 1979 and 9.4 per 1,000 in 1980 (Halperin and Garfield, 1982). This forced the Nicaraguan government to opt for, as an emergency measure, mass anti-malarial drug administration in 1981.

Besides malaria, tuberculosis and parasitism were endemic. Among the top ten killers of children were diarrhoea, tetanus, measles, whooping cough and malaria. Some of the major causes of death in 1973 are shown in Table 1:

TABLE 1

Causes of Death	Death Rate per 100,000 population (1973)
1. Infectious and parasitic diseases	141.8
2. Diarrhoeal diseases	97.0
3. Pneumonia and influenza	190.5
4. Avitaminosis and other nutritional diseases	2.1
5. Homicide and war	24.0
6. Poorly defined causes	151.8

Source: Garfield and Rodriguez, 1985.)

Some studies in malnutrition have estimated that between 46 and 83 per cent of Nicaraguan children were malnourished. The same studies have indicated that a high proportion of these children (25 to 45 per cent) had the more severe secondary and tertiary types of malnutrition (Halperin and Garfield, 1982).

Health Services: A decade before the revolution four separate agencies and independent health ministry offices in each province ran in Nicaraguan health system. All four agencies and provincial officies of the health ministry functioned independently without any coordination. The ministry of health had the main responsibility for rural health care.

For the salaried population, the Nicaraguan Social Security Institute (INSS) was established in 1957. Twenty years later it served only 16 per cent of the economically active population and only 8.4 per cent of the country's total population. (Garfield and Taboada, 1984). Several churches ran highly respected hospitals, but for the most part they treated only those who could pay cash. The National Guard had relatively good medical services, including most specialities, through a system of hospitals and clinics of its own.

Health Expenditure: Of all the expenditure in the health sector, the INSS commanded 50 per cent, the ministry of health only 16 per cent and other local agencies, charitable and private insurance groups the remaining 34 per cent (Garfield and Taboda, 1984). This way, a great divide was created between a tiny minority of insured salaried workers (mainly white collar government employees) and the overwhelming majority of non-insured. Preventive care was neglected, save for some disorganised attempts in respect of malaria. All of the INSS and much of the ministry's budget was devoted to curative care. Of the approximately 13 dollars per capita spent in Nicaragua in 1972 by the health sector, only about 3.15 dollars went for preventive care (Garfield and Taboada, 1984).

Health Personnel: The Somoza dictatorship considered students, especially in the health professions, a potentially subversive group and tried to limit their number. Thus, Nicaragua had only one medical school with 73 students in a class. The total number of doctors was 1,300 and there were only 43 professional nurses per 100 doctors. Not surprisingly, 80 per cent of rural health manpower consisted of folk-healers. We do not have any information about their indigenous medical practices and what the revolutionary government is doing about it.

An official community health experiment was carried out in Nicaragua from 1976 to 1978. In this programme, 768 *parteras* (traditional birth attendants) were trained in six-day courses, to carry out in their community improved obstetrical care, treatment of diarrhoea in children using packets of oral rehydration salts, provision of contraceptives, provision of aspirin for fever and pain and so on. A trained *partera* was given a free health kit [illegible] was required threafter to purchase supplies through the local government clinics. At the end of the experiment in 1978, about 40 per cent of the *Parteras* had already dropped out (Heiby, 1981). The government was so disinterested in the programme that it did not make any serious effort to keep it going nor did it carry out any follow-up work.

Thus, what the revolution inherited was poverty ill-health, unemployment and rickety health services. In addition, it also had to (1) care for the families of the 50,000 dead in the civil war and the 100,000 wounded people and their families, and cope with (2) considerable destruction of industry (Somoza bombed his own industries to thwart revolution), disorganisation of two agricultural cycles with repercussions on food supplies and exports (GDP per capita had declined to levels of 17 years before), a massive foreign debt, a near-total lack of foreign currencies and high inflation, (3) a poorly developed economy (much less developed than Cuba in 1959), (4) dependence on agro-exports for earning foreign exchange, and (5) the ever-present threat of economic sanctions and even of a blockade (Fourth International, 1985).

Post-revolutionary Reforms

Many persons mistakenly think that immediately after the proletarian revolution, the revolutionary regime brings under state ownership *all* the means of production and services. Actually, while the state takes upon itself the responsibility of providing adequate health care, it does not do so by any such overnight take-over of the services. The seizure of state power and the nationalisation of the core of the economy can be timed by the day of the insurrection, but the actual consolidation of the revolution takes place in course of time, by a process in which the continuing class struggle within the country and internationally plays a prominent role. Even decades after the revolution in these countries, small-scale private producers (artisans, private medical practitioners, small capitalists, etc) are not completely expropriated. They survive as a marginalised sector and under restrictions. Therefore, an attempt to characterise a revolution in its initial years only on the basis of the proportion of the state-owned economy and services could lead to wrong conclusions. What is decisive is the ideology and class nature of the revolution's leading organisation, the actual role played by the new state in the ongoing class struggle—does the state side with workers and farmers? Does it expropriate those propertied classes who go against the people's interest?—and the development and extension of the workers' and farmers' power and control over all aspects of the new social structure.

The continuing presence of private sector in the economy thus does not disprove the proletarian character of the revolution, although such a sector does have subversive potential. This makes it more imperative for the revolutionary state to deepen the class struggle. The state of reform of the health care system in Nicaragua is also at this stage only. Although the state has undertaken full responsibility for providing health care (see basic principles cited above), and it has achieved astounding success in improving health care, this has not been done by sweeping abolition of the private sector and private practice. The trend, however, is clear. The state is for people's health care. Those health personnel who want to continue in the old way of looting people, will not be allowed to do so. First restriction and then, if necessary, expropriation.

Health Structure: Immediately after the revolution, the previously separate health agencies were integrated within the Ministry of Health (MINSA) and a United National Health System was started.

Doctors' Response: Nicaragua had one medical school in Leon and a second one was opened in Managua in 1981. By 1983, 2,240 medical students were undergoing training in these schools, an increase by four times over the 1978 level (Braveman and Roemer, 1985). Unlike in the case of Cuba, only about 300 of the total 1,300 doctors left the country due to the revolution. This was largely because private practice was allowed. Before the revolution, about 65 per cent of the doctors were paid for some public service, but for most of them this constituted only a few hours a day and the rest of the time they were engaged in private practice. After revolution they were pressurised to fulfill their contracted time and increase their scheduled public practice to at least six hours a day. Their salaries were standardised (Garfield and Taboada, 1984).

After revolution, the doctors' official organisation Federacion de Sociedades Medicas de Nicaragua (FESOMENIC), which is a leader of the Federation of Professional Organisations (CONAPRO) and has the backing of the propertied strata, increased its political activities. In 1980 when the government started discussing a law to regulate professional activities, it opposed it tooth-and-nail. It organised a one-day walk-out and even threatened mass emigration to Miami. The government retreated by making the law less specific. Nevertheless, the government passed the law and for the first time made the doctors and other professionals accept the government's right to regulate their professions. This tussle at the same time divided the professionals into the progressive and the conservative camps and in July 1981 a formal split took place. The progressives could maintain official recognition and this ultimately forced the consertatives to rejoin the organisation (Garfield and Taboada, 1984).

Personnel and Training: International assistance has greatly helped Nicaragua to fill up deficiencies in the number of personnel. There are about 800 foreign health workers in Nicaragua, coming mainly from Cuba, Latin America and Western Europe. Cuba and the Pan American Health Organisation have also greatly assisted in teaching programmes.

A complete overhauling of the medical curriculum has been carried out since 1979. The new six-year course consists of clinical service, teaching, administration and research. For imparting such integrated medical training, 'work-study programmes' are instituted wherein the student is required to assist from the outset in supervised public education projects, in community surveys to asses health needs, door-to-door programmes to give immunisations, serve as an administrative assistant in local public health offices, etc. The student is also placed in work settings to learn about occupational health and in outpatient settings to learn about preventive maternal and child health services. On the other hand, the clinical rotations are almost always hospital-based, thus creating a discrepancy between the primary care goal and hospital based training practices. This discrepancy is increasingly being questioned by the teachers and students (Braveman and Roemer, 1985).

Nicaragua has six nursing schools with five times the pre-1979 enrolment. The educational qualification required for enrolment has been drastically lowered. For Auxiliary Nurses the person should only be literate and ten months' training is given. Technical Nurses require primary school education and are given two years' training. While professional Nurses require secondary school graduation and are given three years' training (Braveman and Roemer, 1985). At this rate it is certain that Nicaragua will correct the present adverse nurse-doctor ratio very rapidly.

One of the earliest programmes started by the MINSA was training paramedical health aides, called *brigadistas*, who were selected from the youth organisations. They received several months' training and were sent to isolated rural areas. They were to serve for at least two years after which they would be eligible for professional training. In fact many of them went on to become health educators and medical students. The doctors forcefully opposed this programme and so it was revised: The revised programme took up mobilisation of a large number of people in the immunisation, malaria prophylaxis and sanitation campaigns which were launched in 1981. The campaign included a short-term training course and public health education. It is estimated that upto 10 per cent of the country's population was mobilised as health volunteers in these campaigns. The class and mass organisations listed earlier in this article actively participated and provided volunteers. They also promoted the formation of local, regional and national community health councils which are now active throughout the country (Garfield and Taboada, 1984).

But a campaign means a programme that ends at one point of time. This is not allowed to happen by converting the activity into permanent work by providing extensive training to a section of the volunteers. There are now 25,000 of these permanent but volunteer *brigadistas* comprising about 1 per cent of the total population (Garfield and Taboada, 1984). This supports our earlier contention that many of the workers and peasants are armed defenders of the revolution and also health workers. People's participation is not a cosmetic exercise, but is elevated to self-activity by the people to decide the condition of their lives.

Achievements of the Campaigns: As mentioned earlier, during and after the civil war, the incidence of malaria increased so much that there was no alternative but to take

up mass campaigns to bring it under control. The government opted for Mass Drug Administration (MDA) in 1981. Three ambitious goals were set: (1) to prevent new cases, (2) to cure subclinical cases, and (3) to reduce the transmission. For this purpose, 70,000 voluntary workers, *brigadistas*, were trained. These volunteers recruited many helpers. A malaria census was carried out in which 87 per cent were covered. The drugs were given to an estimated 19,00,000 people. More than 80 lakh does of chloroque and primaquine were distributed in October 1981.

As a result, the total number of malaria cases fell considerably from November 1981 to February 1982. However, the incidence of P.Vivax cases returned to endemic level by March 1982, while that of P.falciparum stayed below endemic level for three more months. The net result was that if we take the average of the previous two years' incidence rates as the baseline, there were 9,200 fewer cases of malaria than expected during the four months of reduction in general incidence. It is clear from this that the objectives of prevention and cure of malaria infection were better realised than that of reducing transmission, as the MDA could not reduce transmission to a 'break point' below which malaria eradication could occur (Garfield and Vermund, 1983). This shows that even such a massive exercise could not realise the theoretically possible decisive break in the chain of infection.

Compared to this moderate success of the MDA campaign, the *immunisation campaign* was a resounding success. BCG vaccinationis given at birth, and the three-fold increase in coverage since 1980 reflects a huge expansion in maternal care. Diptheria-pertusis tetanus (DPT) immunisation is given at health centres and health posts as part of routine child growth and development services. The DPT coverage is increasing at an average rate of 30 per cent per year. However, this increase is not so spectacular. Measles vaccination reches 60 per cent of children in the first year of life and 85 per cent before their sixth birthday (Williams, 1985).

The key to this success in immunisation is a mass campaign through holding regular 'health days' all over the country. For health days, 20,000 volunteer *brigadistas* have been trained in vaccination, health education, etc. On health days vaccinations are done between 7 am to 6 pm with schools, community buildings and health facilities as assembly points finishing with a house-to-house sweep through the neighbourhood. The results are announced through mass media (Williams, 1985). Table 2 shows the immunisation coverage.

TABLE 2: ESTIMATED IMMUNISATION COVERAGE OF CHILDREN UNDER 12 MONTHS

Immunisation	Percentage Coverage in	
	1980	1984
BCG	33	97
DPT	15	33
Poliomyelitis	20	76
Measles	15	60

Source: Ministry of Health and UNICEF Office, Managua (as given in Williams, 1985).

Health Financing and Facilities: Government funds directly related to the provision of health care jumped from 200 million *cordobas* in 1981 and reached an estimated 1,593 million *cordobas* in 1983. In 1981, the government budget for health was 12 per cent of all public spending (Garfield and Taboada, 1984).

In the last months of the revolutionary war, Somoza's National Guard destroyed four hospitals, seriously damaged five others and looted four more. Post-revolutionary reconstruction has now provided 18 hospital beds per 10,000 population. There are 4,829 hospital beds in Nicaragua, but greater awareness and accessibility has increased their use. Five hospitals with 1,078 beds are under construction (Garfield and Halperin, 1983). To tackle problem of diarrhoea, especially in infants, the government initially planned 170 rehydration centres, but popular demand and people's action have brought 226 such centres into existence (Halperin and Garfield, 1982). The availability of health services has increased tremendously. It is estimated that more than 80 per cent of the population now has some regular access to medical care (Garfield and Taboada, 1984).

Health Condition: Finally, about some overall achievements. The IMR has got reduced to 80 per 1,000 live births. No case of polio has been reported since 1982 despite an epidemic in neighbouring Honduras in 1984. Only 3 cases of diptheria were reported in 1983. Neonatal tetanus, however, still remains a significant problem (Williams, 1985).

In short, the reforms in health care in Nicaragua show people's determination to collectively change society. The future of the revolution is, however, not fully secure and is threatened by internal and external dangers. This has happened to all such revolutions. The Soviet Union was invaded by several countries to destroy the Bolshevik Revolution; Cuba had its Bay of Pigs invasion; Vietnam had to fight for decades for survival; Grenada was overpowered; Nicaragua has been assaulted by the CIA sponsored contras and a partial blocade since 1981. The very fact that it has achieved so much under conditions of a threat to its very survival and continous war since 1981 shows the revolution's lasting power, the new state's mass base and the preparedness of the working masses to sacrifice to preserve the gains of the revolution, including the gains in health and health care. Nevertheless, the war has its impact, and such protracted aggression has consequences for people's health. Epidemiology of war is an emerging subject and the war on Nicaragua has made it much more relevant. Health professionals will have to understand it more and more for the world is likely witness more revolutionary upheavals, revolutionary crises, and imperialist aggressions.

Health Consequences of War in Nicaragua

The Central American countries are under the grip of violence, more so since 1980. Violent death is the most common cause of death in El Salvador, Guatemala and Nicaragua since 1980. At least 40,00 people have been killed by military and death squads in El Salvador (population 47 lakhs) and many more have been killed in bombing and other attacks. It is estimated that 20,000 Gautemalans (population 41 lakhs) most of them indigenous tribes, have been killed by the army in the last three years. The war takes a toll mainly

of young men. This is illustrated by the fact that although life expectancy at birth among Salvadoran women has risen steadily, reaching 67.7 years in 1980, it fell remarkably for Salvadoran men from 58.4 years in 1978 to 52 years in 1980. More than 1,20,000 Central Americans have died from war-related causes since 1978. This amounts to a 10 per cent rise in mortality above expected levels during this period. It is estimated that more than a million Central American live as refugees within the region and a million have fled to America (Garfield and Rodriguez, 1985). This is how imperialism is trying to crush the hopes and rebellion of people in Central America, who have been inspired by the Nicaragua revolution. The effects of imperialist aggression on Nicaragua are no less tragic.

More than 100,000 persons were wounded in the revolutionary war in Nicaragua and 50,000 lost their lives. After the revolution, the CIA-backed contra attacks have, between January 1980 and January 1986, killed 3,999 persons, wounded 4,542 persons and 3,791 persons have been kidnapped. In 1985 alone, 1,852 persons' were wounded, 1,463 were killed and 1,455 kidnapped, indicating the counter-revolutionaries who have been killed in the armed conflicts—they are also victims of US aggression—the number of casualties totals 23,822 persons including 13,930 dead (Ortega, 1986). The president of Nicaragua, Daniel Ortega, in his recent speech to the National Assembly said that the total number of people killed as a result of the US policy of terrorism against Nicaragua would be equivalent, as a proportion of the population, to some 1,03,000 dead for the US (Ortega, 1986).

Ortega also gave information about other losses:

1. In 1985, aggression increased Nicaragua's balance of payment deficit by 108 million US dollars, the trade deficit rose by $ 89 million and the capital deficit by $ 19 million.
2. A total of 120,324 people have been displaced from their lands by the war, of these, 33,000 have been relocated to 55 urban and rural settlements.
3. Health services to 250,000 people have been impaired due to the damages caused to 55 health units, including one hospital and four health centres.
4. 48 schools have been destroyed and 502 other education centres can no longer operate because they are located in war zones; as a result, a total of 60,240 elementary and 30,120 adult education students are no longer able to attend classes.
5. In the area of social services, the mercenaries have destroyed four rural child care centres, three nutrition centres for children and two offices of the Nicaraguan Social Security Institute. This has directly affected services to 2,222 children and elderly people.

The strength of the Nicaraguan revolution lies in people's power and in its accomplishments in the fields of health, education (the revolution's strategy of imparting education to all has been most successful), nutrition, employment, etc. The counter-revolutionary contra mercenaries know this. Hence health and educational centres and health functionaries are made special targets of attacks. At least 22 health workers (including two European volunter physicians), medical students, nurses, malaria control workers, health educators and vaccination campaign workers have been killed while delivering health care (Siegel *et al*, 1985). Garfield (1986) puts the number of health workers killed at 31. In terms of availability of health facilities, as the Nicaraguan Health Workers Union (FETSALUD) reported to visiting American physicians, the increase the in the number of civilians and soldiers wounded in the war has strained existing health facilities, leaving less resources for normal civilian needs (Siegel, 1985).

Further increase in the health budget has been suspended due to increase in military spending, the budget for which increased from 18 per cent in 1982 to 25 per cent in 1984. Not only that, 20-25 per cent of Managua's health workers are at the war front, actually fighting with arms and many of them are getting killed. This has necessitated training of new health personnel.

The economic embargo on Nicaragua by the US has devastating consequences for health care. Immediately after the revolution, there was a crisis in the availability of pharmaceuticals. The foreign drug companies wanted the debt incurred by the Somoza government to be settled before sending any more drugs. The Sandinista government had to accept responsibility for the debts in exchange for favourable terms of repayment (Halperin and Garfield, 1982). Another major problem is the lack of spare parts for medical equipment. Much of the machinery is made in the US, but shortage of US dollars as a result of the war makes acquisition of replacement parts difficult (Siegel, *et al*, 1985). Thus, when equipment breaks, it may remain out of commission or one piece of equipment must be cannibalised to fix another (Helperin and Garfield, 1982).

In 1983, agricultural losses directly related to the war totalled 10 million dollars. Since 1981, total destruction related to health has been valued at over 70 million dollars (Siegel, *et al*, 1985).

Effects on Diseases

The term 'epidemiology of aggression' was first used by a group of doctors connected with Regional Leishmaniasis Group in Nicaragua, to analyse health data ascribable to the US aggression in 1982. Before 1979 leishmaniasis was known to exist in Nicaragua but was not reported to the WHO. After the revolution reported cases increased and came to ocupy the fifth rank among all notified infectious diseases. When the Leishmaniasis Group started a study of this disease in 1982 in one region, the study was violently interrupted after 24 hours by a contra attack in which several people were killed, including Dr. Pierre Grosjean, one of the two European volunteer physicians (Morelli, *et al*, 1985).

One aspect of the epidemiology of war is *the impossibility of obtaining basic data*. Cases registered in this region progressively increased from 1980 (143 cases) to 1982 (2,107 cases); since 1982, with the intensified war activities, the number of notified cases fell to 1,054 in 1983 and 806 in 1984. This is not due to actual decrease in number of cases but due to destruction of facilities, less access to services and migration. Another aspect of this epidemiology is related to troop movements. Non-immune people have the clinical manifestations when they enter, in troop movements, the natural environment of leishmaniasis. This can be seen from age-sex distribution: the significantly high incidence usually seen in under 5s has shifted to appear in males aged 15-30 years. The third aspect is related to migration. People living

in endemic areas often resettle, because of the war, in non-endemic areas, resulting in the first appearance of the disease in those zones. Thus, as the Leishmaniaris Group puts it, in the war-affected northern regions of the country, aggression and leishmaniaris, indeed, coincide 'epidemiologically' (Morelli, 1985).

Before we conlude, a mention should be made of the psychological effects of war. The Americans, for instance still suffer from the psychological effects of the Vietnam war and a numbr of studies are still being carried out to assess the increased number of vehicular accidents and suicides amongst Americans who were drafted to fight for US imperialism in Vietnam. As reported by Dr. Felipe Sarti, the chief psychologist at a psychiatric day centre in a poor suburb of Managua, approximately 25 per cent of all patients show depressive illnesses connected with the war. This depression is particularly prevalent among parents and siblings of soldiers who have been killed or sent to the front (Seigel, *et al*, 1985).

The US sponsored aggression is still continuing and no end to it seems likely in the near future. Such a situation can jeopardise the revolution in the long-term. This annihilation of revolution must stop. The US administration knows that if it opts for direct intervention, it won't be any cakewalk. The working masses are armed and they will fight till the last person. And hence this new strategy of protracted aggression combined with economic harassment and internal sabotage through the still-unexpropriated big strata of the former ruling classes. The danger is real. If a massive counter revolutionary attack is mounted by all of them it will have a chilling effect on the revolutionary movement all over the world. Even if such an attack fails, there are bound to be major distortions in the revolution. Its democratic fermen. may get lost. A massive bureaucratic state apparatus may emerge and with the best class-conscious workers and peasants dead in the war, such an apparatus can get consolidated. International solidarity is a need of the hour.

Many health professionals have reacted with revolutionary zeal to this need. Today, over 900 internationalist health workers are helping the revolution. They are from Cuba, Latin America, Mexico and Europe. Many more can and should join. If we allow imperialism to roll back this revolution, as it did in Grenada, history will not forgive us. No matter how strong the justification for localist thinking and local-based activity, this international defeat will affect all of us sooner or later. We must say, "Imperialism—hands off Nicaragua".

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Medical Care and Health under State Socialism

bob deacon

The transformation of the social relationships of welfare is central to socialist and communist social policy and may be thought through in relation to six key aspects of social policy: (1) the priority afforded social policy, (2) the form of control over welfare provision, (3) the agency of welfare provision, (4) the nature of the relationship between welfare provider and user, (5) the rationing system adopted by the welfare institutions concerned, and (6) the assumption embodied in the policy regarding the sexual division of labour. This article reviews medical care and health policy in three countries, the Soviet Union, Hungary and Poland from the standpoint of a perspective of ideal socialist and communist medical care and health policy derived from an analysis of Marxist and allied critiques of capitalist medical care policy and theoretical work on socialist social policy. The author concludes that medical care policy in all three countries exhibits very few characteristics of socialist medical care. It also examines the possibility (for the moment suppressed) provided by the Solidarity movement in Poland of a new development toward a more genuine socialist medical care and health policy.

The article has been slightly abridged from the International Journal of Health Services Volume 14, number 3, 1984 and excludes the detailed review of medical policy in Hungary.

Socialist Medical Care Policy

The aim of this article is both to explicate a socialist conception of ideal medical care policy and to review medical care policies in the Soviet Union, Hungary and Poland to see whether they provide concrete examples of socialist medical care.

It is clear from George and Manning's (1) review of the few specific statements on socialism and health made by Marx, Engels, and Lenin that their emphasis is on those *causes* of ill-health located in the nature of capitalist society. As an example take Lenin's view that "thousands and tens of thousands of men and women, who toil all their lives to create wealth for others, perish from starvation and constant malnutrition, die prematurely from disease caused by horrible working conditions by wretched housing and overwork" (2). A socialist health policy would therefore be concerned primarily to prevent avoidable disease. There is far less in their writings on the particular form of curative health service that should be provided to cope with unpreventable disease.

Few subsequent Marxist theorists, addressing the nature of socialism have had anything specific to say about medical care. Bahro (3) is an exception here. His discussion of the need to alter the division of labour radically under socialism is illustrated by the example of the organisation of work in a hospital: "We can just as well imagine the everyday situation in a hospital, to take an example from a different sphere, one still more strongly burdened with the prejudices of the traditional division of labour, in which the entire staff consisted of people with full medical training, or other pertinent qualification, who also took part in all nursing and ancillary work and in social and economic functions as well." This twin concern with both preventive medicine—the fact that it will become a high priority under socialism—and the altered form of curative medical care will recur as the conception of socialist medical care emerges in this article.

Lesley Doyal's (4) excellent analysis of the causes of, and ways of curing, ill-health under capitalism is structured around these twin concerns. Her brief postscript to *The Political Economy of Health*, where she considers the implications of this analysis for the struggle for a healthier society, discusses both aspects. On the question of prevention of ill-health under socialism, she is sensibly cautious:

> Naturally we would not argue that a transformation of the mode of production would abolish illness—people will always become sick and die. But what we can show are the ways in which potentially avoidable illness has become prevalent under capitalism . . . [It follows that] the demand for health is in *itself* a revolutionary demand.

This concern with preventing avoidable ill-health is a touchstone of socialist policy. It would reach into every corner of working and domestic life. Not only would each work process be evaluated from the standpoint of whether it made workers ill or not, but also such diverse aspects of life as food, housing, transportation, and personal relationships would be affected far more than under capitalism by considerations of their health-enhancing potential. Changes in life-style in relation to all of these things would be a matter of general public concern and action. Necessary economic and social changes that would enable people to live, eat, and relate differently would be a matter of medical policy.

On the form of curative medical care under socialism, Doyal (4) writes:

> The struggle must therefore go beyond the immediate demand for more state-organised medicine, towards a critical re-evaluation of the more qualitative aspects of the current organisationof medicine and a redefinition of our health needs. This is not, of course, to suggest that in a socialist society all existing medical knowledge and skills would simply be abandoned in favour of something called "proletarian medicine" . . . [But] no technology would be used uncritically and without some assessment of its value according to criteria which had been democratically decided upon . . . Hence a socialist-health service would not only have to provide equal access to medical care but would also have to address itself seriously to such problems as how to demystify medical knowledge and how to break down barriers of authority and status both among health workers themselves and also between workers and consumers.

The theme of the necessity of changing *the social relationships embodied in medical practice* under socialism is taken up by other Marxist critics of the National Health Service (NHS) in Britain. After criticising existing left orthodoxy, which sees within the existing structures of the NHS a more-or-less socialist form of medical care requiring only an injection of formal democracy, Mick Carpenter (5) argues:

> A socialist health service . . . will be one where all barriers of hierarchy and mystification, between health workers and between them and the sick people they work with are torn down. It will be a health care provided neither because of the material necessity

of wage workers nor out of an imposed set of obligations which fall upon certain people, mainly daughters and wives.

Vicente Navarro (6) has pursued this theme of changing the social relations of medical practice, insisting that "Communist medicine is not bourgeois medicine better distributed but, rather, a qualitatively new form of medicine created by new relations of collaboration and cooperation in the process of the production and reproduction of health."

The forms of medical technology and science themselves are therefore likely to be transformed under communism. This is not to argue that all capitalist medical science and technology is false or wrong, merely that capitalist social relations of production are reflected in the present choice of research areas and in the forms of technology used. Different social relations, those of reciprocal cooperation, would be reflected in the technology of communist medicine. An attempt to specify the way medical technologies under capitalism reflect the social relations of capitalism has been made by the Radical Science Journal collective (7). For instance, Shelly Day (8) suggests that obstetric technology reflects both capitalist and male interests in the way it reinforces the passive role of women just at the point where (ideally) their active control of birth process is required. Postnatal depression, Day argues, may result from this highly contradictory experience.

Recently a number of authors and organisations have attempted to construct in a more concrete way the expectations we should have of a genuinely socialist medical care policy. Colin Thunhurst (9) has argued that the scope of health services should be increased to embrace an occupational health service controlled by workers. Alex Scott-Samuel (10) has suggested the need for a socialist epidemiology in which a community diagnosis focus would be central, where questions would be asked by those who live in a locality about who is ill and why and what could be done to create more healthy living and working conditions. It has also been argued (11) that the service should allow for alternative modes of treatment, and for the involvement of people in the provision of services in the way that is now prefigured by some Well Women clinics. There should be a "different relationship between health team and patient . . . [providing] the patient with the opportunity to participate in a fully informed decision concerning the course of treatment."

The Politics of Health Group (11) has argued that we need to challenge the medical dominance and "hierarchy" in the health service; to give patients more say in their own health care; to capture more control over our health; to give "community care" real meaning; to achieve more and better routine health care for non-life threatening complaints; and to fight the *causes* of ill-health.

One organisation that has tried in its practice to prefigure these conceptions of a genuinely socialist medical care policy in the here and now is the Community Health Council in Brent, North London. Its publication *It's My Life Doctor* (12) designed for use by the local community, sets out seven common medical problems, how they might be prevented, how the National Health Service fails in relation to them, and what kind of preventive and curative health policy would be more appropriate to the needs of people suffering such problems.

The feminist critique of medical care practice under the NHS is also well advanced (13). A socialist health service that responded to the feminist critique would abolish the sexist content of medical practice. Thus, women's ailments and conditions (e g, menstruation, menopause, pelvic inflammatory disease) would be given proper attention. Gender stereotyping of women through the use of such labels as "hysterical" would be challenged. Women would take control over their bodies in matters of sexuality (abortion on demand) and childbirth (natural childbirth). The form of service would be altered so that women did not just perform the caring functions such as nursing while men performed a separate curing function. Nor would women be left to carry the burden of caring for the family. A socialist epidemiology would also incorporate a feminist epidemiology. Central to this would be the recognition that the disabling double burden of paid work and domestic work should be alleviated.

The conclusion so far that socialist medical care would embody a transformation in the social relations of medical practice reflects the general conclusions I have drawn elsewhere (14) that the transformation of the social relationships of welfare is central to socialist and communist social policy. I have argued that the conception of a transformation of social welfare relationships needed to be thought in relation to six key aspects of social policy: 1) the priority afforded social policy, 2) the form of control over welfare provision, 3) the agency of welfare provision, 4) the nature of the relationship between welfare provider and user, 5) the rationing systems adopted by the welfare institutions concerned, and 6) the assumptions embodied in the policy regarding the sexual division of labour. I also argued that a distinction should be drawn between socialist and communist social policy. The summary of our expectations of both socialist and communist medical care policy indicated in Table 1 is based on those general considerations relating to social policy as a whole and the specific considerations reviewed so far in this article relating to medical care in particular.

A few comments on Table 1 are necessary. First, it has been argued so far that a policy for health under socialism (and communism) would not just be a policy of providing a transformed medical care service. Issues of medical care would be redefined into issues of health, which in turn would become issues of working conditions, housing, and economic and social life in general. It has been argued (15) that a socialist conception of health can only be developed once medical care itself is removed from the centerpiece of analysis. The view taken here is that in assessing progress in any socialist society, we need to consider both the form that socialist medical care provision will take (to cure and care for those suffering from unavoidable disease) and the extent to which a socialist health strategy has been developed that places equal emphasis on changing social conditions to prevent avoidable ill-health. The table attempts to show both how the form of medical care would be different and how a socialist health strategy would be developed (though perhaps concentrating more on medical care policy than on health strategy). Measures of whether a socialist health strategy is being developed are provided by the criteria dealing with the priorities of medical care as between cure and prevention, and by the assessment of the outcome of medical care (health) policy in terms of morbidity and mortality.

Second, the priority given to medical care under socialism cannot simply be measured in terms of the resources put into the health sector of the economy, whether in terms of money, person power, or facilities. While we would expect health ex-

penditure to become a higher priority in the initial stages of socialist development, the infusion of resources is clearly no measure of socialist progress in medical care in societies already at the threshold of communism. As we have argued, greater benefit in terms of the health of the population is more likely to come from transformed working and living conditions that prevent avoidable ill-health. A measure of the output of the health service in terms of morbidity and mortality rate is a better indication of the priority afforded to a society's health than a measure of money spent on the health sector. A lower level of morbidity and mortality is also likely to reflect the importance attributed by a society to the preventive aspects of medicine, which are otherwise so difficult to quantify.

What people suffer and die from is another important measure of socialist progress. This applies both to underdeveloped and developed socialist societies. In the former, the eradication of the preventable infections and communicable diseases will be a crucial indicator; in the latter, a reduction in the incidence of the new illnesses of developed societies will be a measure. Socialist and feminist epidemiology has already made progress in identifying the social causation rooted in the capitalist mode of production of such conditons as cancer and cardiovascular diseases. A genuinely socialist health strategy would therefore be expected to have acted upon the conclusions of this new epidemiology and effected changes in the relevant social conditions which will show up in terms of reduced morbidity and mortality from these new "capitalist" diseases.

Third is the rationing of medical care. Elsewhere (14) we have concluded that services did not necessarily have to be free at the point of use to be allocated along socialist lines. As long as incomes were more-or-less equalised, and as long as the commercialism of the private market was no longer present, the attaching of a price to a service provided by the state (e g, housing) could permit the users of a service to ration their own use of the service (a smaller or bigger house?) according to their own set of priorities. Now there is the argument that charges for health services, even if incomes were equalised, should not be made because an individual use of the service has indirect impact on the health and welfare of others, and everyone's use must therefore be encouraged even if an individual would order her or his own priorities differently. Indeed, there is even the argument for

Table 1

Expectations of socialist and communist medical care policy

Aspect of social policy	Aspect of medical care policy	Socialism	Communism
Priority	1. Outcomes in terms of health	Less and more equal morbidity and infant mortality than capitalism; greater and more equal life expectancy	Less and equal morbidity and infant mortality; greater and equal life expectancy
	2. Resources in terms of money	Higher expenditure than capitalism	Need for higher expenditure may no longer exist
	3. Resources in terms of person-power/facilities	Higher level of resources than capitalism	Need for higher level of resources may no longer exist
	4. Priorities in terms of cure, care, prevention	Prevention and care prioritised	Prevention and care central
Control over welfare provision	5. Central control	Central direction with political cadre influences	Centre provides democratically resolved planning guidelines only
	6. Local control	Democratic worker and user involvement.	Mass participation in policy resolution and implementation
	7. Control of medical technology industry	Nationalised and progress toward socialised relationships	Socialised working relationships within industry and between it and the health service
Agency	8. Agency of provision	State, workplace, family and market giving way to community provision	Community provision
Relationships between provider and users	9. Status of doctors	Lower than under capitalism	Equal status with all workers
	10. Division of labour in medicine	Reduction of vertical and horizontal divisions	Abolition of vertical divisions; movement between horizontal divisions
	11. Nature of medical technology	Progress toward new forms	New forms of medical technology reflecting communist social relations
	12. Status of patients	Higher, accompanying deprofessionalisation of doctors	Equal status with providers
Rationing systems	13. Region and class access, usage, and outcome	Progress toward equality	Equal access, usage and outcome
	14. Rationing procedures between individual patients	Free usage with access rationed by work and need according to democratically determined formulae	Free usage with access according to self-perceived need
Sexual divisions	15. Sexual division in medical care employment	Progress toward no division	No sexual division of medical labour
	16. Sexist content of medical practice	Progress toward no sexist content	No sexist content of medical practice

a practice of financial inducements to use a particular service for the beneficial impact that an individual's use of it might have on the health of others. This assumption of nil direct cost to the individual consumer of the service is built into the table as a measure of socialist progress (even though this may not be such a crucial aspect of a socialist health service as is usually assumed). It can be taken as one measure of a nation's collective commitment to the health of all its members.

There are a number of other problems associated with the criteria used to determine socialist and communist progress in medical care, including those of putting into operation the general measures indicated in the table. How exactly is the "lower" status of the medical profession to be determined? How is progress toward deprofessionalisation to be measured? What are the indicators of the abolition of the sexist content in medical practice? These problems of operationalisation are often compounded in practice by the non-availability of data. Despite these difficulties, however, I believe it is possible to draw some general conclusions about the socialist status of the medical care policies of the countries studied.

Soviet Medical Care Policy

There are many accounts of the Soviet health service by writers of various shades of socialist opinion. These vary from the openly enthusiastic (16) to the fundamentally critical (17). The summary survey provided here is distilled from these and a number of other secondary sources (18-20). For the discussion of the extent to which there are sexist aspects to the organisation and content of medical care, more general works on the position of women in Russia have been consulted (21-23). Detailed references are not generally provided to these frequently used sources.

George and Manning (1) state that, at the outset, Bolshevik medical care policy goals included: comprehensive qualified medical care; availability to everyone in the population; a single, unified service provided by the state; a free service; extensive preventive care, with the aim of creating a healthy population; and full worker's participation in the health service. While many of these goals continued to guide policy and many were achieved, the development of medical care policy also came to be shaped by other historical exigencies, especially in the periods of socialist retrenchment during the New Economic Policy (1921-1929) and of intense industrialisation and forced collectivisation of the 1930s. The way these factors influenced medical care policy and the final outcomes of policy will now be considered in detail, under the following headings: the priorities of medical care; the control of medical care; the agency of provision of services; the relationships embodied in medical care; the agency of provision of services; the relationships embodied in medical care; the rationing procedures adopted; and lastly, the extent of sexist organisation and content of medicine.

Priorities of Medical Care

Does Soviet medical care live up to the expectation we would have of it if it were socialist in terms of 1) providing more health care resources than comparable capitalist societies, 2) distributing health care resources and activities disproportionately in favour of prevention, and 3) providing for a healthier population than populations in equivalent capitalist societies?

The Soviet Union spends a far smaller proportion of its gross domestic product on health care than the Common Market countries. Michael Kaser (18) estimated that 2.8 per cent of GDP was spent on health care in the USSR in 1968, compared with 5.1 per cent of GNP for the United Kingdom, 8.0 per cent for Italy, and 5.0 per cent for Ireland. A more recent estimate (24) based on 1974 figures suggests this has dropped to 2.5 per cent. However, in terms of the number of doctors and hospital beds per head of population, the Soviet Union is far ahead of these same countries. There were, in 1977, 34.6 physicians per 10,000 people in Russia compared with 2? ? in the EEC as a whole. There were 121 hospital beds for the same population in 1977 compared with 95 for the EEC (24). These details are summarised in Table 2. The apparent paradox between low expenditure levels and high-level provision is resolved once it is understood that first, there has been far less capital expenditure on Soviet medical care compared with the EEC. In 1970, 5 per cent of health service outlays was devoted to capital expenditure in the USSR compared with 10 per cent in Britian in 1971-1972 (18). This explains the often reported poor quality and overcrowding of medical care institutions and the lack of surgical and pharmaceutical equipment that occurs from time to time.

As to the priorities within health service expenditures, it is clear that, despite the early creation of a preventive arm of the health service, the hospital sector of medicine dominates all the other sectors and consumes the largest proportion of resources. The Bolshevik government in the very early days established the important departments of sanitation and epidemiology, with responsibility for flying propaganda squadrons combating social sources of disease. This was seen in 1928 by one sympathetic commentator (25) as "offering a good example of the new attitude and principles of Soviet medicine." Even in 1925, however, expenditure on sanitary and hygienic education and on campaigns against contagious disease consumed only 2.6 per cent of the health service budget (25). The Council on Medical Education in 1925 aimed to produce doctors with not only a thorough scientific understanding of the connection between biological

Table 2

Medical Care Expenditures, Resources, and Outcomes in the Soviet Union, Eastern Europe, and Comparable Capitalist Countries[a]

Indicator	Soviet Union	Hungary	Poland	Nonsocialist comparison
Percentage of GDP spent on medical care	2.5[b]	3.3[b]	3.9[b]	5.1-6.7[c] (EEC states)[d]
Population/physician	289[e]	435[e]	606[e]	455[e] (West Europe)
Population/hospital bed	82[e]	114[e]	113[e]	105[e] (West Europe)
Infant mortality/ 1000 live births	27.8[f]	24.3	22.4[f]	11.4-17.6[e,f] (EEC excl. Portugal)
Life expectancy:				
Male	66.5[f]	66.1[f]	66.5[f]	70.2[e]
Female	74.3[f]	72.8[f]	74.9[f]	76.3[e] (Britain)

a Sources: references 18, 20, 24. b 1974. c 1971-72. d percentage of GNP. e 1977. f 1975.

processes and disease, but also with: 1) sufficient social science background to enable them to understand current social life and world events: 2) the materialist point of view, which is essential to a correct understanding of the mutual relationship between an organism and its milieu, 3) the social service point of view, which takes into account the working conditions and home life of the patient; and 4) the knowledge and ability not only to treat diseases, but to prevent them. However, an analysis of the curriculum of the Medical School of Moscow University of 1925-1926 suggests that even if we are to include such topics as "Historical Materialism and the History of Revolutionary Movement," only about 5 per cent of the content was directly related to these four points. The socialist idea of creating a new medical knowledge and practice derived from new social relations of production reflected in a new division of labour between doctor and patient, does not seem to be borne out by the existence of this disease- and clinically-oriented curriculum.

Turning to the present day, the proportion of doctors working in hospital care compared with ambulatory care is increasing. There is more rapid increase in the number of doctors specialising in tertiary medicine (e g, surgeons, neurologists, psychiatrists) (17). One estimate (19) of the proportion of health care resources devoted to "environmental health and physical education" is 4.8 per cent. There is evidence, though, that the quality of primary care is better than that of hospital care.

The outcomes of the Soviet health service, measured in terms of morbidity and mortality rates, cast considerable doubt on whether sustained socialist progress in health has been achieved. During the early years of the Revolution, progress was made in decreasing mortality and morbidity. By 1925, even though industrial output and grain harvest were below 1913 levels, infant mortality had fallen to half of the pre-Revolutionary level (20). This progress, when compared with that of the West, has now been lost, as can be seen from Table 2. Today, mortality rates for infants and adults compare very unfavourably. There were 27.8 infant deaths per 1000 live births in the whole of the USSR in 1975 and 19.2 per 1000 in the Ukraine Republic, compared wth 15.7 in Britian in 1978. Infant mortality actually rose from 1971. when it was 22.9 per 1000, to 27.9 per 1000 in 1974 (20). Life expectancy was 66.5 years for males and 74.3 years for females for 1970-1975, compared with 70.2 and 76.3 for Britain in 1977. There is evidence that life expectancy for adult males began to decline in the mid 1960s. Age-adjusted death rates for adults rose from 861 per 100,000 in 1965-1966 to 955 per 100,000 in 1972-1973. The largest increase in mortality has been in the 40-59-year category (20). The absence of morbidity and mortality data analysed by social class does not permit any assessment as to whether there has been greater equalisation in longevity and mortality.

An analysis of the diseases Russians now suffer and die from also provides a disturbing commentary: "As the death rates from infectious disease have fallen in the Soviet Union, mortality from cardiovascular diseases and cancer has risen, both relatively and absolutely. The force of these modern epidemics has been sufficient to *raise* [the] age adjusted death rate by 18 per cent over the last decade" (20). Cooper and Schatzkin (20) comment that "social environment ... typical of capitalist society ... can be shown to be responsible for these mass diseases." The first Commissar of Health in the USSR said: "There is no interest in concealing the social character of these diseases... the social causes of diseases among working people are found out in order to remove them." But Cooper and Schatzkin (20) conclude: "The opposite [now] appears to be the case: disease is promoted, its social character is obscured and avoidable hazards are not removed."

Control of Medical Care

The early days of the socialist experience in Russia (1917-1921) provide perhaps some of the most potent examples of the possibilities of socialist medical care policy in terms of formal control over medical care policy and institutions. The direct confrontation in the 1920s between the medical profession's Pirogov Society and the Bolsheviks, which was won by the Bolsheviks with the aid of the health workers' union, should be noted. This struggle curtailed the special privileges of the profession and the control it had over medical care institutions at that time. This early period of Russian history provides us with the best practical examples of how the important issue of control of health service and other welfare institutions will be raised under socialism. The debate, which is also recalled by Navarro (17), between those who favoured control by the workers in health service institutions and those who favoured control by soviets or delegates of workers in a locality, is one which poses for us now the question of what form democratic control should take in any future socialist society. In this example, the form of administration chosen was one in which doctors, as state-salaried employees, had no special professional access to power, with the day-to-day management of health service institutions invested in a nominee of the local soviet, who would be advised by an elected committee of health service workers. Those who favoured control of each institution by a democratically elected committee of workers of that institution were criticised for not understanding the needs of overall planning and were defeated.

With the eventual erosion of any active life in the local soviets and as soviets became empty conduits for the rule of an increasingly centrally controlled and Stalinist Communist Party that determined even local policies through the national budget, any vestiges of active worker participation in—let alone control of—health service institutions disappeared. At the same time, the initial decline in the power of the medical profession was reversed. The Ministry of Health has relied heavily in more recent years on the advice of the increasingly institutionalised medical profession, and it has become the practice for all directors of health service institutions to be qualified doctors. The ratio of income between doctors and nurses is now as large as 10:1 (17). Indeed, George and Manning (1) conclude that, nowdays, "Soviet health care [is] centrally controlled to meet the requirements of industrialisation and the academic interests of medical scientists." However, despite this heavy reliance today on medical personnel to run the health service centrally and locally, a large proportion of these administrators are Communist Party cadres and are, of course, in the last analysis, responsible to the Central Committee of the Party (17). The socialist notion of political control of policy through the active involvement of party cadres at all levels of administration is theoretically maintained; however, from the point of view of an ideal socialist medical care policy, the ideas and

practice of these cadres leave much to be desired. They no longer appear to favour—if they ever did—the genuine mass involvement in health matters which should be the hallmark of communist medicine.

Agency of Provision of Services

The main agency of provision of health care in Russia is the state. Hospitals polyclinics, feldsher outposts, and so forth are all run on behalf of the state by local councils, but there is scant evidence of mass participation in, or democratic election to, the local bodies which run these institutions. The workplace features quite significantly in the system of provision. Under the Stalinist industrialisation policy, a large number of health centres were established in industrial enterprises. There ranged from 100-bed hospitals to the provision of a nurse. They were organisationally separate from the Soviet-run health services and were part of a policy of giving priority to preventing loss of industrial production. The demands of industrialisation and the needs of workers coincide to some extent here, but it is not easy to determine how far these services give priority to the latter over the former when it comes to a direct conflict between them. The scarcity of Russian data on disease and death analysed by social group, and the nonpublication of accident data, is perhaps indicative of which priority is uppermost. There is further evidence of the priority given to workers in Russia by the development of separate health service institutions run by and for railway workers and the wide provision of rest cure and convalescent homes and holiday villas by trade unions for their members.

The private market is an important provider of medical care services in the Soviet Union, although there is some legal and some illegal private practice. Abortion constitutes on example. Additionally there are autonomously financed medical institutions, or "paying polyclinics" (*platnaya poliklinika*), in Moscow and other big cities where patients pay a small sum for prearranged appointments with specialists. Like the nonpaying polyclinics, these are run by the local authority and are not really examples of the operation of a competitive market in medicine. They provide, however, a commentary on medical care rationing procedures used. If you can pay, you get better treatment. Although it is discouraged, payment for treatment is also made on a regular basis to doctors and nurses in ordinary state hospitals. In the 1960s the table of customary payments ranged from 5-25 roubles for attention in hospital to 500 roubles for a course of treatment for venereal disease by a senior specialist (18). Women in the family still provide a large amount of medical care in terms of nursing the sick and elderly. This is institutionalised in the provision made for women (not men) to receive state grants for time off work to look after sick children.

Relationships Involved in Medical Care

Turning now to the various aspects of the relationships involved in medical care, we must remember that the status of the medical profession in the Soviet Union is lower than in the West. The division of medical labour is similar, however. The only exception is the feldsher system of partly trained nurses-midwives-practitioners who practise in rural areas. This is a socialist innovation, but one inherited from pre-Revolutionary days. Indeed, early Bolshevik policy, later abandoned, was to get rid of these "second-class doctors."

Whether or not Bolshevik policy initially understood that socialist medicine must redefine the practice of medicine, in such a way that a change in the division of labour takes place in both the vertical and horizontal senses, there is no evidence that this policy was pursued in later years. Indeed, the absence of a family doctor system brings specialisation and mechanistic medicine even into the diagnostic stage of the polyclinics. George and Manning (1) write:

> For example, the Ministry of Health recently stated that "it is impossible to conceive t[illegible]ly a single doctor with a broad background co[illegible]arantee highly qualified care for patients suffering from a variety of illnesses which are frequently complicated to diagnose and treat." Such a view in contrast to the major incidence of relatively simple and self-limiting illnesses brought to primary-level physicans, clearly indicates the interest and perception of medicine oriented towards academic specialisation rather than patient needs.

There is also the practice of tipping doctors, which reflects the esteem in which doctors are held by patients. There are no adequate independent complaint procedures against doctors. There is no free choice of doctors by the patient. These points contribute to the conclusion that there has been no sustained challenge to the relationships involved in the capitalist practice of medicine in the Soviet Union. Navarro (17) is convinced that the Soviet system of health care is dominated, as in the West, by what he terms technologicalisation, depoliticisation, hospitalisation, and urbanisation.

Rationing Procedures

Does Russian medical care embody socialist aspirations in its system of distribution and rationing? There is evidence (1) of a sustained attempt to provide for a reasonable degree of territorial justice between different regions of the USSR in terms of doctors and hospitals, although the quality of service probably varies geographically more than the quantity. The emphasis on central planning has enabled this achievement to be registered. Within each region of the country, however, resources are concentrated in the urban areas.For example, Moscow in 1972 had 76 physicians per 10,000 inhabitants compared with 28.3 for the country as a whole (17). There does not appear to be a larger number of feldshers to compensate for this in the underprovided-for rural areas.

It is more difficult to be precise about the allocation of services between social classes and groups. The urban concentration of resources, taken together with the development of workplace-based health services, reflects a concentration of provision in favour of the urban working class as opposed to the peasantry. There is, however, no hard evidence about health service usage by social class, or even, as we saw earlier, health outcomes by social class. Nor is the impact of any differential usage on health known.

The fact that polyclinics are, for example, open on Sundays for all services is a reflection of an overt policy to make services available in a way that fits the needs of working people. Against this, however, has to be set the existence of closed-access clinics and hospitals such as the colloquially termed *Kremlouka* for senior state and party officials. There is also a special polyclinic for scientists with a doctorate. Furthermore, the people who have privileged access to these facilities are the ones who are likely to be able to purchase pharmaceutical preparations, not otherwise readily available, in closed-access shops (*Zakrytie raspredliteli*) (18).

The medical care services are for the most part free, with the exception of the paying polyclinics described earlier. Price is generally as a rationing device only in relation to drugs, dentures, spectacles, and surgical appliances, and there are the exemptions for the young and the disabled. About 30 per cent of the cost of drugs in 1970 was recoverable by charges, which compared with 50 per cent in Britian (18). How services that are free are actually rationed informally between competing consumers is again not known. Waiting lists and queues clearly operate, but there is no discussion of the impact of these informal *ad hoc* rationing devices on usage by class, age, or sex in the literature reviewed.

Sexual Divisions

There are two aspects to the impact of the Russian health service on women: first, the extent of and nature of female involvement in health service employment; and second, the degree to which the practice of medicine is sexist in its content. There is no doubt that women have been recruited to all ranks of the medical and nursing professions and to ancillary employment in the health services in far larger proportions than in equivalent Western health services. Ninety per cent of primary care physicians, 70 per cent of nonprofessional workers, and 50 per cent of managers and administrators are women. Eight-five per cent of the total health labour force is female (17). (It must be remembered that the status of even senior professional health service employees is lower in Russia than in the West.) Women moreover occupy a small proportion of the more senior posts. Only 20 per cent of medical professors are women. There is also some evidence that, as the status of doctors increases, the employment of women in this sphere is declining. Only 54 per cent of those now embarking on medical training are women, and men are admitted into medical studies with lower grades than women (21).

Evidence to allow any firm conclusions to be drawn about health care as it affects female consumers is far more patchy. The right to abortion has sometimes existed in Russia and at other times, especially from 1936 until the 1960s, has been expressly removed (26-28). The demographic needs of the country have, in later years, played the most important part in influencing this policy. Childbirth nearly always takes place in hospitals. In so far as medical care and allied child-care facilities have been developed with the extra express "needs" of women in mind (e g, their right to paid time off to nurse a sick child in hospital), it has been argued that they have been predicated on the twin requirements of women as workers and as mothers. The emphasis on the role of women in Russia as mothers, despite their role as workers, is well-known and, some would argue (29), was even present in the work of Alexandra Kollontai in the 1920s. Indeed, it would appear that there is resistance among some Russian women to the demands of this double burden, so that genetic and psychological counselling is now a service being provided in Moscow to encourage childbirth and happy marriage (21). Lapidus (23) concludes:

> Soviet sociological analyses show no sensitivity to the distinction between reproduction—a biological fact—and child rearing or housekeeping—socially learned roles whose relationship to biology is not given but requires explanation. The equation of femininity, maternity and domesticity is virtually universal, and the recognition that roles might be socially assigned rather than endowed by nature is largely absent.

Although Lapidus does point later to emerging Russian examples of critical literature that attempt to challenge this idea (literature that goes so far as to present the case for reduced working hours for men to overcome the sexual division of labour), it is more than likely that medical care texts, education, and practice in this area are predicated on conservative and antifeminist assumptions. A feminist analysis of Russian medical textbooks and medical practice is awaited.

It is possible now to go some way toward determining whether any or all of the 16 expectations of socialist or com-

Table 3

Extent to which Socialist and Communist Medical Care Expectations have been Realised in Existing Socialist Societies

Aspect of medical care policy[a]	Soviet Union	Russia, 1917-21	Hungary	Poland	(Solidarity's proposals)
1. Outcomes in terms of health	No[b]	No	No	No	(Soc)
2. Resources in terms of money	No	No	No	No	(Soc)
3. Resources in terms of person-power/facilities	Soc[b]	Soc	½ Soc	No	(Soc)
4. Priorities in terms of cure, care, prevention	No	Soc	No	No	(Soc/Com)[b]
5. Central control	Soc	Soc	Soc	Soc	(Soc/Com)
6. Local control	No	Soc	No	No	(Soc/Com)
7. Control of medical technology industry	½ Soc	½ Soc	½ Soc	½ Soc	(Soc/Com)
8. Agency of provision	Soc	Soc	Soc	Soc	(Soc/Com)
9. Status of doctors	Soc	Soc	Soc	Soc	(N.A.)[b]
10. Division of labour in medicine	No	No	No	No	(N.A.)
11. Nature of medical technology	No	No	No	No	(N.A.)
12. Status of patients	No	No	No	No	(Soc)
13. Region and class access	No	No	No	No	(Soc)
14. Rationing procedures	½ Soc	½ Soc	½ Soc	No	(Soc)
15. Sexual division in employment	Soc	Soc	Soc	Soc	(Soc)
16. Sexist content of medical practice	N.A.	N.A.	N.A.	N.A.	(N.A.)
Number of socialist expectations realised	6	8	5½	4½	(12)
Number of communist expectations realised	0	0	0	0	(5)

Notes: a See Table 1 for an explanation of criteria used in this table.

b Abbreviations: N.A., inadequate information available to enable judgement to the made; No, the socialist or communist expectation has not been realised; Soc, the socialist expectation has been realised; Soc/Com, the aspect of the service could be attributed to the realisation of either socialist or communist expectaion; ½ Soc, in some respects but not all, socialist expectation has been realised.

munist medical care delineated in Table 1 have been realised in the Soviet Union. The results are tabulated, along with those for the other countries to be reviewed in this article in Table 2. For only five of these indicators is it felt appropriate to claim unqualified socialist achievement in contemporary Russia, with some indication of this in a further two. The five relate to the level of service provided (more doctors and beds), the nature of the central control of the health services (political), the agency of provision of medical care (state and workplace), the status of physicians (lower), and the position of women as employees of the service (large percentage). Even some of these have to be qualified, however, and, importantly, there is evidence of recent reversal. The status of doctors appears to be rising, the position of women in the profession declining, and the influence of medical expertise on central policy increasing.

It is, of course, possible to interpret even these five indicators of socialist medical care policy in a different light. It could be argued that these aspects of the service are compatible with, and necessary to, the needs of an exploitative state capitalist or state bureaucratic ruling class. Their apparently socialist character may conceal other reasons for their existence. A society in which the accumulation needs of the ruling group took precedence over the consumption needs of the working class would quite likely adopt tight central control over health planning, develop a workplace-based system of health care to ensure productivity, limit the independent influence of doctors (and be more successful at this than a capitalist ruling class operating in conditions of parliamentary democracy), and pull all women into the labour force. Indeed, such a state capitalist or state bureaucratic class, while adopting these measures, would equally not adopt many of those measures which we have associated with socialist medical care but which Russia does not exhibit. Such a class would not spend much on health, would not allow a democratic form of control over its institutions, would not encourage preventive measures which clashed with accumulation needs, and so on.

There is certainly no evidence of communist achievement in Russian medicine. Paradoxically, however, in the early days of Revolution there was some such evidence in, for example, the democratisation of the service at a local level. This development has long since been reversed. There was also an important stress earlier, at least in official pronouncements, on preventive medicine. Russian medical care, then provides us with very few concrete examples of our conception of ideal socialist medical care, and none of communist medical care.

One final cautionary note. It was stated earlier that in one particular way the table of expectations of socialist and communist medical care (Table 1) underemphasised the fundamental break with capitalist medicine that communist medicine entails. Communist medicine would involve itself with all aspects of social and productive life (working conditions, living conditions, eating habits, relationships) in so far as they affect health. This review of Soviet medical care has only noted such wider aspects in small ways, and then negatively, e g, in relation to the pattern of disease, which is similar to a capitalist one. It is most unlikely that all aspects of social life in the Soviet Union are evaluated in terms of their impact on health. The conclusions drawn therefore probably overemphasise the socialist nature of Soviet medical care policy.

Hungarian Medical Care Policy

I do not intend to provide as exhaustive a review of medical care services in Hungary or Poland. Both countries occupy similar positions as members of Comecon and are, as we shall see, modelled in many ways on the Soviet experience, with the important difference that they had this experience imposed on them after the Second World War.

There is a limited secondary literature available on the Hungarian health service. The main sources used here are Kaser (18), Ferge (30), and World Health Organisation (WHO) publications (31), which are supplemented by personal observation and by discussions with the small group of social analysts working within the Institute of Sociology in Budapest.

Health care is universally available in Hungary and largely free at the point of consumption; however, this university was finally achieved only in 1975. The insurance basis of the scheme excluded about 15 per cent of country dwellers, in 1960, but this was reduced to about 1 per cent by 1972 as a result of the collectivisation of agriculture that took place between 1958 and 1962. Those excluded were helped on a means-tested basis with medical fees by the social aid committees of local councils. Before the Communist Party came to power after the war, a large proportion of the population was excluded from coverage—except for the 133 days of Hungarian Soviet Republic of Bela Kun in 1919, a genuinely Hungarian-born revolutionary workers' council type of government, under which medical care was in principle provided free to all. (This regime was crushed and replaced by an authoritarian right-wing regime.) The system of health care in Hungary is remarkably similar to that in Soviet Union in a large number of aspects, although there is less factory medicine, more private medicine, and no use of feldshers.

The overall conclusions about Hungarian medical care are summarised in Table 3. They are remarkably similar to those for the Soviet Union, except that whereas the socialist nature of aspects of Soviet health care was in some doubt because of non-availability of data, the availability of such data for Hungary defines these aspects more clearly as nonsocialist. This is particularly the cause in the matter of inequality of morbidity and mortality by social class. Hungary differs from the Soviet Union only in not ever having experienced the brief democratisation of the health services that Russia did in the early years of the Revolution.

Polish Medical Care Policy

The purpose of including Poland in the survey is to examine whether the working-class uprising led by Solidarity in 1980 and 1981 might have made medical care policy more genuinely socialist had it not been suppressed. In the discussion of Soviet and Hungarian medical care polices, little mention was made of the existence of any social forces struggling against the current form of provision. This was mainly because there are none at present having much impact. Poland, by contrast, provides us with a modern laboratory in which to test out the theory that working-class struggle against the existing form of socialism contains within it the seeds of a struggle for a more genuine type of democratic socialism. Clearly Solidarity drew into its wake all manner of ideas, themes, and groupings whose aims may not have been the better development of socialism; however, these counter-revolutionary tendencies were insignificant (32).

More interesting is whether the end result of the struggle for socialism by Solidarity might have led to a pluralistic conception of socialism in which self-managed enterprises became increasingly subject to market forces to the possible detriment of the overall socialist objective. For our purposes here, we focus on the demands and the forms of struggle that arose in the course of the life of Solidarity as far as medical care is concerned.

In almost all respects, Polish medical care policy is like that of the Soviet Union and Hungary. Data on health expenditure and medical care outcomes are included in Table 2. The number of doctors and hospital beds per head of population is small compared with both the other Eastern European countries studied and Western Europe. A full account of medical care policy in Poland can be found in Millard (33, 34) and Kaser (18). Millard (34) summarises his findings as follows:

> The health service has remained in a state of crisis, currently worsening as a result of mounting economic dislocation and political tension. Inadequate access to treatment, lack of continuity of care, poor quality of care, profound shortages of drugs and supplies, and the absence of preventive medicine are some of the manifestations of this crisis. Its main causes lie in the political weakness of the Ministry of Health, with consequent underfunding and the non-fulfilment of its plans. This situation is exacerbated by continuing organisational fragmentation, the neglect of primary care, existence of conflicting aims in health policy, and the dominance of an ideology of clinical specialism.

Rather than reviewing the Polish health service systematically in terms of the six questions and 16 criteria applied to the Soviet Union and Hungary, I shall concentrate on three aspects of policy which, taken together, indicate just how far the Polish health service had reached a state of crisis even worse than in other Eastern European countries surveyed. As we shall see later, it was precisely to these aspects of medical care policy that Solidarity paid most attention in its proposals for fundamental change in Polish society. The three aspects are the failure of the central planning system, the inequalities of access and corruption involved in access to decent health services, and the neglect of preventive medicine. The summary Table 3 does, however, evaluate the Polish medical care service in terms of all the criteria established earlier.

Crisis of Planning

Central planning of medical care and the implementation of the plan at the local level are in the hands of people placed in position through the system of *nomenklatura*. This party control of key positions extends as far as directors of important medical establishments (32). It was described in the critical report prepared by members of the Experience and Future Discussion Group (DiP) (35) in Warsaw in 1980 as "the personal merry-go-round," which enables a person listed to be appointed to a post conferring equivalent or even higher status after having bungled a previous job. The tendency in this situation is for particular aspects of plan fulfilment to be nominally achieved even by cheating or misrepresenting data, and for plans to be politically constructed to accommodate the interests of those engaged in their nominal fulfilment. Those whose jobs rest on paper fulfilments have no interest (unless pushed from below) in real fulfilment of plans, especially if, as we shall see later, their particular material interests are separately catered to. Only the democratic association of actual producers has a genuine interest in real plan fulfilment. These tendencies found expression in the Polish health services in terms of, for example, extending the stay of certain patients in hospital who no longer needed treatment to bring down the average cost of treatment of patients registered in that hospital to the norm in terms of cost per patient per day. Another example is that certain units did not provide access to diagnostic equipment for other units since they did not want to bear the cost. A further example is where construction enterprises concentrated on fulfilling easier components of their building programme than those represented by hospital construction. In so far as problems arising from these practices were identified by the Polish government, the solution was always seen in terms of improved administration rather than a political challenge to the structural aspects of the system that led to these practices (34).

Inequality of Access

The other side of this coin of bad management is that the managers can afford to be protected from its worst aspects by virtue of their privileged access to special clinics, or their ability to bribe their way past the access barriers of the state service. The following account drawn up by the Experience and Future Discussion Group (35) portrays this graphically:

> The state of the municipal and general hospitals is catastrophic: hospital wards are overcrowded, and cases of death among patients left in hospital corridors are not uncommon. Conditions created by chronic under-investment in health services fully warrant the assertion that access to treatment, hospitals, good doctors and medical equipment has become very difficult to obtain for the majority of the public. At the same time, the privileged few have special enclaves of luxury closed to people who do not belong to that group. A glaring example is the Ministry of Health clinic at Anin.
>
> Free health care for the vast majority of the population was once considered an achievement of People's Poland. But unfortunately, today the situation is completely different. Irregularities and deficiencies in health care have meant that medical treatment now requires money, quite a bit of money, as well as connections and pull. They have led to a distressing situation—if one does not bribe the nursing staff, one does not get decent attention, and if one does not bribe the doctor his care will be marginal. One now pays to get a bed in a hospital or an operation, to say nothing of medicine. Gradually the public is being divided into two categories: those who can afford proper medical care and those who cannot. If the situation does not improve substantially, the latter group will get even larger. If we are to compare incomes to the real costs of obtaining treatment by a specialist, we would probably find that at least half the public could not afford it today. This situation is alarming in the extreme.

It has been estimated (36) that the money allocated recently to create 120 places for the privileged elite at the Anin Clinic could have added 1,100 places for ordinary patients. This privileged access to special hospitals is not restricted to the managerial and bureaucratic elite, but is available also to paid officials of the Trade Union Central Committee. The TUCC has its own polytechnic "which has the advantage of referral for inpatient treatment to the Hospital of the Ministry of Internal Affairs" (18). No doubt this was one of the reasons for the rapid desertion from the official trade-union movement to Solidarity once it was formed.

Neglect of Preventive Medical Care

The lack of attention to preventive medicine in Poland involves the continuation of dangerous working processes, the

pollution of the atmosphere and rivers, and the production of carcinogenic foods. On the first point, a Solidarity spokesman (32) stated:

> Health and safety has been one of our greatest problems for many years. The health and safety representatives of the old unions were too close to management. The health and safety councils were worthless. Production had to be kept up at all costs.

Something of the consequences of this situation can be judged by an analysis of work days lost in Poland. In 1974, accidents, poisoning, occupational and nonoccupational injuries were reported to be the cause of 20 per cent of all days lost from work (18). On the question of atmospheric pollution, the Experience and Future Discussion Group (35) commented:

> Industrial enterprises emitted 3,439 million tons of gases [in 1977] into the atmosphere but trapped only 667,000 tons. If one adds to this that the majority of stack filters are almost always shut down because of the energy shortage, it must be concluded that Poland is one of the few countries in the world in which emission of industrial gases and particles into the air is not subject to control.

On the question of harmful foods, the same report (35) asserts that "25 per cent of the food products on sale have characteristics that are to some degree harmful to health, to say nothing of the many food products that are commonly adulterated by producers." Added to this must be the chronic alcoholism in Poland.

Table 3 summarises the position as far as the socialist status of its health services is concerned. Even allowing for the corrupt system of party *nomenklatura* to be classed as socialist cadre control, Poland scores still worse than its socialist neighbours. The second column indicates the extent to which the demands of and forms of struggle adopted by the Solidarity movement during its brief life, if implemented or adopted permanently, would have led to the health service becoming more genuinely socialist or even communist.

Solidarity and Medical Care Policy

Clearly a number of different political currents were present within the Solidarity movement. Those who propounded an explicit commitment to a Marxist analysis were probably in a minority, and argued with others who held a perspective of a pluralist socialism in which decentralised self-management enterprises operated to meet needs in the context of market demand. Nonetheless, it was impossible to perceive a fairly consistent line emerging from Solidarity on the question of health policy. This policy can be deduced from the reports of the Experience and Future Discussion Group (35), the text of the charter of Workers' Rights published in September 1979 (32), from the Gdansk agreement itself in August 1980 (37), and from *ad hoc* reports that emerged from Poland before the imposition of martial law in December 1981. These reports indicated that more resources should be found for health care and greater priority should be given to preventive medicine. This was usually expressed in the more limited terms of occupational safety, but a general concern for "the pillage and devastation of the natural environment" was present. In common with all other parts of the economy, the centralised planning system should be replaced by a system of workers' self-management. Medicine should be free (at least, and this reflects a certain sectionalism in the union's demands; to health service workers). Privileged access to medical care should be abolished and a fairer democratic rationing procedure for allocation to, for example, holiday homes, should be worked out. Early retirement (age 50 for women and 55 for men, or after 30 and 35 years' work, respectively) was a further health-related demand. Missing from the analysis of issues and list of demands was any real confrontation with the existing horizontal technical division of labour in medicine or with the form of technology and curative procedures used, although, in general transformed social relationships were at the heart of the methods and goals of Solidarity. The statements on the status of the medical profession were equivocal on this point. Also absent was any concern for the sexist content of medical practice. Indeed, spokespeople involved with the [illegible]n movement often expressed quite conservative views on the issues of central concern to Western socialist feminists. The Experience and Future Discussion Group (35), for example, concluded: "Family policy ought to be as solicitious of the material well being of the family as of its moral status, which requires better preparation for family life, safeguarding the stability of the family, and the efforts to control the mass spread of abortion." The October 1981 Solidarity conference resolved, in a section dealing with family policy, to urge the creation of decent living conditions for unmarried mothers in order to discourage abortions. However, by November 1981, one month before the demise of Solidarity, the *Guardian* (38) could report the existence of a Women's Forum in Warsaw which listed among its areas of concern the need to dispel stereotyped images and harmful myths about women in society, to ensure teaching about and improvement of birth control techniques, and to overcome the situation where arguments about abortion are "distinctly naive."

While a number of such general goals of medical care policy were emerging during the life of Solidarity, sectional demands were also being put forward of interest only, for example, to the workers in the health service. The demand that salaries of all health service workers be increased, and that additional payments be made for handling patients with infectious diseases, are two of these. The latter embodies the idea of hazard pay, which could be criticised from a socialist perspective.

Solidarity, in the form that gave rise to these demands, is now repressed. This, itself, is a commentary upon the nature of Polish socialism. However, even in its short life, and before it had time to work out a strategy for the successful implementation of workers' democracy in Poland, it accomplished some achievements in the health field. These included: the change of use of administrative buildings to health use, the sacking of certain incompetent and corrupt health officials, the closure of an aluminium plant in Silesia because of the effect it was having on the local environment, and the direct control by workers of the distribution of medical equipment in short supply.

Thus, while Millard (33), writing even before the demise of Solidarity, was partly correct in his interpretation that "there is no cause for optimism as the Poles struggle with the problems of years of under-funding, a cumbersome and inadequate planning system, a weak ministry, and a hierarchy of organisation and status which favour clinical specialism to the detriment of a widely conceived primary care sector unifying curative and preventive medicine", he was also partly wrong in not seeing the potential, albeit not realised, for the socialist transformation of the health service that was surely there in the ideas and programme of Solidarity.

Conclusions

This survey of medical care policy in existing socialist societies has led to one inescapable conclusion. In the economically advanced socialist societies of the Soviet Union and Eastern Europe there is very little evidence of socialist, let alone communist, forms of medical care policy. Mortality data from these countries, which are a measure of health policy as distinct from medical care policy, also compare unfavourably with data from equivalent capitalist countries.

It has been argued that the few characteristics of Eastern European medical care policy that have been described as socialist (e g, the state's role as major provider, the lower status of doctors, the employment of women in the health sector) may be attributed, for example, to the fact that these societies are dominated by a state bureaucratic or a state capitalist ruling class. Such a class is able to exercise more effective control over employment policies and levels of pay unhindered by the independent health trade unions and professions that are a factor in the West.

The accounts have not revealed a static picture of policy. There was evidence in the early days of the Russian Revolution of radical experiments in medical care policy. These seem to have given way over the years to a more orthodox capitalist-like view of what constitutes good medical care. Hungary and Poland never experienced such radical experiments. The possibility, once again for the moment repressed, of a new leap forward toward a more genuine socialist and even communist medical care and health policy in Poland has been described.

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Obstetrician on Trial

AFTER a 10-month suspension from all clinical and lecturing duties, obstetrician Wendy Savage is in the midst of a month-long inquiry into the management of five women during childbirth at the London Hospital. She is accused of professional incompetence, a charge usually reserved for alcoholic, drug dependent or similarly incompetent doctors.

The barrister representing the local health authority which brought the charges said the case was being presented as if it were a contest between the male establishment and the women's movement, and between the impersonal imposition of technology and a woman's freedom to decide how she gives brith. While he does not see the case in this light, the women's health movement in Britain is convinced it is precisely that.

Wendy Savage is the only obstetrician at the hospital who does home visiting for ante-natal care, and she involves women fully in decisions as to how they give birth. She is at odds with other doctors in the hospital over the politics of obstetric practice, and has fought to keep the abortion unit open when others would like to close it. There has been evidence during the inquiry that the head of obstetrics intended to try and oust her from the time he took over his job. The previous head of the department, who had set the principles and standards which Ms Savage also follows, also faced a great deal of hostility until he left.

What the local health authority probably did not expect was for the case to get such wide public attention. The inquiry has been held in public at Ms Savage's request, accompanied by constant media coverage and public discussion. Whatever the outcome, the practice of obstetrics is bound to be affected, as so many women have heard the arguments for women's choice in childbirth.

—Women Global Network on Reproductive Rights

Population Policy and Situation in China

A Note

malini karkal

Chinese population policy has had two major programmes to control births: the later-longer-fewer campaign launched in the early 1970s and the one-child family campaign introduced in 1979. The immediate demographic results of these campaigns have been undoubtedly impressive, surpassing the achievements of even Japan in terms of fertility reduction.

Even so, it is unlikely that the goal of limiting the country's population to 1.2 billion in the year 2000 set by the Chinese govrnment will be achieved. Opposition to the one-child family programme has been widespread, especially since the introduction of the 'responsibility system' changing the unit of economic management from the production team to the family. The one-child family norm has also been found to clash with traditional Chinese social and cultural beliefs and practices.

The author concludes by asking whether, by seeking to drastically restrict child-bearing, the Chinese government may not be undermining its ability to foster the kind of development that it now believes to be crucial for achieving the four modernisations.

THE Chinese population was estimated to be 410 million in 1840. By 1949, when the People's Republic of China was founded, the population had grown to 540 million, showing an annual net increase of 1.19 million, or an average annual growth rate of only 0.25 per cent. High birth rate accompanied by high death rate accounted for the low growth rate of population during this pre-liberation period.

After the establishment of the People's Republic, the country' population situation showed a dramatic change. The death rate which was well above 20 per thousand (28 per thousand in 1936) dropped to 10-18 per thousand in the 1950s and then came down further to a little over 7 per thousand by 1970. This change was brought about by improvement in sanitation, public health, medical care and consequent elimination of several infectious diseases.

An even more marked change was noticed in infant mortality. The infant mortality rate (IMR), which was well over 200 per 1,000 births during the pre-liberation period, came down to 70.9 by 1957. In 1970 the urban IMR was 11 to 13 and in the rural areas it was around 30.

The birth rate continued to be high and till 1970 it was above 33 per thousand. This high birth rate coupled with the low death rate resulted in rapidly growing population. In the six years between 1966 and 1971, the population of China increased by 120 million, a figure close to that of the growth during 1840 to 1949, a period of 109 years.

During the early years of the People's Republic from 1949 to 1952, a period considered to be one of economic restoration, the rise in the natural growth of popultion was regarded as an indication of prosperity and improvement in the standard of life of the people under socialism. During this period neither abortion nor sterilisation was permitted.

Unchecked population growth and its effects on planned economic development attracted the attention of leaders and scholars and that influenced the change in Chinese population policy. In August 1953 the Government Administration Council approved "regulation of contraception and induced abortion". However, at this time neither was any definite family planning programme formulated, nor was there any education of the people for planning and limitation of births.

Family Planning Policy

A specific family planning policy was formulated in the early 1960s. In 1962 the Central Committee of the Communist Party of China and the State Council stipulated the Instructions on Conscientious Advocacy of Family Planning. These advocated controlling of births. Family planning projects were undertake in cities. Production and distribution of contraceptives was systematically planned. The urban brith rate showed a definite decline as a result. However, preoccupation with the Cultural Revolution in 1966 halted all other work, including that of family planning, thus resulting in the earlier mentioned rapid growth in population during 1966-71.

In the early 1970s a vigorous family planning movement ws launched which had the motto "later, longer and fewer". The programme advocated later marriage, longer spacing between births and fewer children. The age at marriage was meant to be 25 for men and 23 for women in rural areas and 26 for men and 24 for women in urban areas—a five-year postponment from the 20 for men and 18 for women stipulated under the Marriage Law of the early 1950s. A spacing of at least four years between births was expected. And finally the expected number of children per couple was two.

In 1978 family planning work in China entered a new stage and in 1979 the "one couple, one child" policy was put forth. The new Constitution stipulated "the control of population quantity, the improvement of population quality, and the mutual adaptation of population and socio-economic development." In keeping with this objective it was officially announced that "the State promotes family planning so that popultion growth may adapt to the plans for economic and social development ... Both husband and wife are obliged to practice family planning ... Late marriage, and late childbirth should be encouraged". Simultaneously, close kin and persons with congenital and genetic diseases were prohibited from marriage.

China now has a goal of keeping the average rate of populaton growth to 1.2 million per annum till 2000 AD. It has a policy that advocates one child per couple, strict control of second births and resolute prevention of third births. Strict action is expected against families not following this policy.

Impressive Results

Demographers point out that the achievements of the family planning programme of China are incomparable.

Upto 1970 Chinese women bore an average six children; by 1980 this number had dropped to 2.2. In 1981 and 1982 Chinese fertility showed a minor increase, but in 1984 the number of births per woman was 2. It is expected that Chinese fertility will show a further decline in the future. The previous world record holder in fertility decline, Japan, had shown a reduction of 'only' 56 per cent during a comparable period and the number of births per woman in Japan had come down from 4.5 in 1947 to 2 in 1957.

From the discussion so far it is seen that the Chinese population policy has had two large-scale programmes to control births, the later-longer-fewer campaign introduced in the early 1970s and the one-child campaign introduced in 1979. Obstacles to the implementation of the one-child family programme include the agricultural responsibility system which strengthened the motivation for large families by shifting responsibility for production from the collective to the household. Chinese culture also advocated "more sons, more blessings" and the Marriage Law of 1980 in effect lowered the age at marriage. Facing public resistance, in early 1984 the Party Central Committee reviewed its stand on fertility control and on 13th April issued a Central Document.

The Central Document reaffirmed the critical importance of family planning and re-emphasised the need to promote the one-child family in order to achieve the four modernisations, quadruple industrial and agricultural output, raise per capita income to $ 800, and hold the population at 1.2 billion by end of the century.

The immediate demographic results of the later-longer-fewer and the one-child campaigns are most readily measured by the recent rapid reduction in fertility. Bongaarts and Greenhalgh have analysed the effects of the two policies on the Chinese population. They state that as a result of the socio-economic development during the post-revolution period, the fertility of the Chinese population would have undoubtedly declined, though at a much lower rate than the observed one. These authors observed that replacement fertility (family size of two children) would have been achieved at the beginning of 21st century, instead of in the early 1980s as actually observed because of government efforts to reduce fertility.

Bongaarts and Greenhalgh estimated that without the later-longer-fewer campaign of the 1970s, the Chinese population would have growth from 0.818 billion in 1970 to 1.58 billion in 2000 and 2.41 billion in 2050. In contrast, the later-longer-fewer policy, by itself, would bring about a popultion size of 1.28 billion in 2000 and 1.81 billion in the year 2050.

Thus the implementation of the later-longer-fewer policy still leaves an eventual population size well in excess of 1.2 billion in the year 2000—the goal stipulated by the Chinese leadership. The one-child campaign is expected to solve this problem. A completely successful implementation of this policy would virtually stop growth of population. The population would reach 1.04 billion in 2000, 1.06 billion in 2025, and then fall to 917 million in 2050.

Opposition to One-Child Family Norm

Experience for the five-year period from 1980 to 1984, the period after launching of the one-child family policy, shows that in reality the population size is higher than expected. It was observed that the average number of children per woman was 2.3 and not 1. This difference was in part an effect of a change in the timing of first births that resulted from the enactment of the new Marriage Law of 1980. Though the law had raised the legal age of marriage as fixed by the Marriage Law of the early 1950s, from 18 to 20 for girls and from 20 to 22 for boys, in effect the new legal age of marriage was lower than that stipulated under the later-longer-fewer campaign. Thus the passing of the law has lowered the age of marriage in reality.

Another problem in implementation of the policy of the one-child family has been the decentralisation of the administrative responsibility for enforcing it. Individual localities are responsible for propagating and implementing the regulations. Top-down pressures for stricter enforcement combined with bottom-up demands for more children have resulted in several lacunae in the implementation of the policy. Another problem in the implementation of the policy is related to the economic incentives, such as wage supplements and priority in housing, schooling, medical care, etc. These costs are expected to be borne by the local authorities. Where the local authorities are rich, many couples sign up and as a result eat into the local funds.

Another difficulty has been that local cadres have many incentives to manipulate figures to match the officially prescribed quota whereas the higher level cadres have few incentives to uncover these errors. As a result, the data deficiencies created at the bottom of the administrative hierarchy are passed upwards, multiplying as they go up.

Also, official policies pronounced over time have had conflicting effects. The responsibility system introduced in 1980-82 shifted the unit of management and accounting from the production team (a unit of 20 to 30 households) to the family. This system also reduced the common funds of teams and increased the private wealth of families. The economic value of children has been increased and there is a strong motivation for larger families. Encouragement to small-scale enterprises and sideline activities has also motivated larger families. In the light of improved prosperity, the incentives for the one-child family have become ineffective.

In the light of the experience so far, UN estimates suggest that on an average the Chinese family is more likely to have 1.9 children by 1990-95 instead of the officially prescribed 1. The Chinese population, according to UN projections, is therefore estimated to be 1.23 billion by 2000 and 1.43 billion by 2025. These figures are higher than the target of 1.2 billion for 2000. Further, the Chinese population is expected to continue to grow after 2025, against the government's goal of a decline to 917 millon by 2050.

Social and Cultural Consequences

Sociologists predict many detrimental effects of the one-child policy in terms of its effects on intra-familial relations, gender inequality and the psychological characteristics of only children. They also opine that by fundamentally altering the basic social and economic unit, the one-child policy may tear the fabric of Chinese society in a way that uproots people's sense of their place in the world and the family's ability to take care of the old. These problems have already begun to emerge and are likely to grow more severe if the one-child policy is successfully implemented.

In the accepted system the unit of family is concerned with short-term tasks of production and consumption and the line

is concerned with long-term matters of inheritance, succession and inter-generational countinuity. An individual's place in the descent line gives him a sense of immortality and meaning to his existence. Among the basic duties of an individual to his family is to produce a son for the continuance of the family line. Since the sex-ratio at birth is around 105 boys to 100 girls, the one-child family policy will leave almost half the couples without a son and prevent the men from performing their duties to their ancestores, thereby uprooting their sense of the continuity and purpose of life. The resistance of the Chinese population to the one-child family is noticeable everywhere. Cases of famale infanticide and physical abuse of mothers who give birth to daughters have also been widely reported.

The Chinese Constitution makes its obligatory for daughters to support their parents. Acceptance of this chang at the cultural level is obviously not easy. Even in families with sons, the benefits for only-children are provided by the State or the collective work unit, rather than the parents. Thus the work units supplant parents as providers and the earlier prevalent system of the mutual obligations of generations is disturbed. This change is bound to affect the old-age support which, under the traditional system, is provided by the family.

Since late 1978 China has moved to expand the role of the private sector, not only in agriculture but also in commerce, services and industry. Since the family has proved to be the most effective production unit in such a set-up, the one-child family policy will work against the success of the role of the private sector. A family with one son is too small to be efficient and that with one daughter will face restrictions on vertical extension.

In short, by drastically restricting child-bearing, China may be limiting its productive capacity and undermining its ability to foster the kind of development that it now believes is crucial for achieving the four modernisations.

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Health Care in Mozambique

padma prakash

Independent Mozambique, despite constant threats to its very existence and three severe droughts in ten years has succeeded in evolving a framework for providing rational health care. This article examines developments in health care within the revolutionary context of the government's avowed programme for constructing a socialist society.

MOZAMBIQUE is a country of five million on the south eastern coast of Africa. It became independent in 1975 after a prolonged ten-year armed struggle against the five centuries old colonial rule of Portugal. Spearheading the liberation movement was the Frente de Libertacao de Mocambique (FRELIMO), the vanguard party of the alliance between the workers and peasants. The armed struggle can be said to have begun in September 1964 with 48 guerilla fighters in four provinces of northern Mozambique. Portuguese troops numbered 70,000, half of them European. In the 10-year war, over 2,000 FRELIMO guerillas were killed.

The constitution of the Republic of Mozambique and the government programme envisage the construction of a socialist society. Within this revolutionary context and as a part of the programme of reconstruction, Mozambique has made radical changes in its health care structure which has meant a reprioritisation of health care, the introduction of new types of health personnel; more appropriate mothods of education; and a fundamental restructuring of the pharmaceuticals sector. It is the last, Mozambique's drug policy which was elicited much interest and attention by its success in bringing down the prices of drugs and making them available to the largest numbers. However, none of these have been isolated programmes—they have been proposed and implemented as an integral part of a comprehensive programme of nation-building derived from a larger political perspective of a socialist society. Also, it seems obvious that these programmes, especially relating to health care, have evolved out of the years of struggles and that experience of FRELIMO in the liberated zones has informed social policy after independence.

Before examining the health care programme in independent Mozambique, it is useful to take brief note of the political and economic developments in the country and the external pressures and internal constraints which have influenced the course of development.

In September 1975, the first FRELIMO-controlled parliament, albeit appointed by the Portuguese, was installed as the transitional government. However, even as it began to find its feet, in December it had to focus its energies on putting down an attempt by a section of the army to bring down the government. In the aftermath, President Samora Machel warned against the tendency of confusing "popular victory with permission to satisfy egotistical desires and considering luxury and depravity as a right by dint of. . . participation in the struggle."

In July 1976, the Mozambique Council of Ministers met for the first time and outlined the country's development policy and its main priorities. These were directed not at "reforming the country's old structures but at replacing them with a "new society for the benefit of the masses". The statement said: ". . . radical change (was envisaged) to place the state at the service of the masses of workers and peasants." Priority was to be given to rural areas—and national defence was to be closely linked to nation-building and resources were to be mobilised for setting up "communal villages". As regards religion, the masses would be protected against any pressure to practise religion. "The Catholic church is a reactionary organisation giving rise to counter revolutionary activities in people's democracies." Efforts were instituted to transform the FRELIMO forces into a regular army and to reorganise the police force.

One of the major features of the development policy was a series of nationalisation measures—the takeover of private schools and colleges, hospitals, clinics and all private doctors' and lawyers' practices. The export of cashew nuts—45 per cent of world output—was placed under government control. All buildings and land were taken over. "Certain individuals" were to work for three years without payment. Everyone had to pay one day's salary each month into a "solidarity bank" to be used to help "oppressed people of the world", particularly Nambia, Rhodesia and South Africa. With the announcement of nationalisation measures however, relations with Portugal deteriorated and agreements of co-operation between the two countries remained suspended.

While 60,000 Mozambique refugees who had fled to Tanzania were invited to return, new citizenship legislation denied residence to any foreigner who had satyed outside the country for more than 90 days. Thousands of Portugese who had fled the country after racial clashes in 1974 lost the right to return.

The liberation of Mozambique "radically altered the balance of forces in favour of African nationalists." There was an intensification of guerilla warfare against the White minority regime in Rhodesia by African nationals based in Mozambique. The border between the two countries was closed and Mozambique, following UN imposed sanctions including the confiscation of Rhodesian property in Mozambique. This resulted in a closure of Rhodesia's rail links with the ports Beira and Maputo. It also cut Rhodesia's food supplies to Mozambique. Mozambique appealed to the UN Security Council for an aid of $ 1,000,000 a year to meet the financial consequences of the decision to apply sanctions against Rhodesia. Sweden increased its aid to Mozambique by 40 per cent. UK supported the decision; Uganda and Zambia saw Mozambique's decision as an "act of courage and commitment to the cause of peace and justice for all mankind" and urged support for Mozambique until victory was won by Zimbabwe. Mozambique's losses in customs and port dues were estimated at £ 17,000,000 a year and about 86,000 Mozambians, it was feared, might be prevented from repatriating their earnings from Rhodesia.

By 1983 Mozambique was reeling under the worst ever drought in 50 years. Moreover, the tactics of the Mozambique National Resistance supported and funded by South Africa, of attacking crucial economic targets, of kidnapping foreign technicians and attacking health centres were aimed at under-

mining Mozambique's effort at creating badly-needed development facilities. Harvests were disrupted and in one district all the seven communal villages, three agricultural co-operatives and state farms were destroyed. Black marketing in food and other consumer essential were rampant and there was a rise in crime rates. Death penalty which had been abolished in 1979 was reinstated as was public flogging for robbers, rapists and black marketers, whereas the previous emphasis was on clemency. In early 1983, chloera killed 250 people and afflicted 7,000 in drought affected regions.

In April 1983 the Fourth Congress of the FRELIMO party set out some immediate goals which necessitated a change in priorities in certain areas. The Congress recognised that combating hunger was the immediate priority. It outlined agrarian reforms—small family farms, which had thus far received little help were to be supported. The development of large farms, and of agriculture co-operatives was seen as a medium-term objective. State farms were to be reorganised and consolidated instead of expanded in the following five years. Existing machinery was to be put to better use. Resources were to be diverted from large projects in industry and agriculture to small projects which would yield immediate returns. In the party politburo the emphasis shifted from military personnel to peasants and those who had been active in the liberation struggle. President Machel acknowledged that Mozambique had "erraneously developed a hostile attitude to private enterprise". A new investment code was drawn up in 1984 permitting transfer of profits and tax exemptions, etc, in certain sectors, but not in sectors such as petroleum. No private unit has been allowed to be set up in the pharmaceutical sector either.

By 1984 over 5,000,000 people had been affected by drought. Agricultural production was cut by 80 per cent in the country's 10 provinces. Lakhs of tonnes of cereals and cassava, a staple food, were lost. According to an FAO report, 100,000 died of starvation. Mozambique signed an agreement with South Africa—in return for South Africa withdrawing support to the guerilla forces of the Mozambique National Resistance, Mozambique would expel ANC activists. However, MNR continues to receive aid and clandestine support from wealthy Portugese in South Africa who number over 600,000. The MNR is now said to be operating in all the country's provinces. Only the northern most province, the cradle and stronghold of FRELIMO is free from such activity. The RNM is said to have 8,000 to 17,000 men.

Food aid has come in from East European countries as well as from USSR, Zimbabwe etc. However, Mozambique has never been self-sufficient in food. The country's annual cereal requirement is around 515,000 tonnes; local production is only 180,000 tonnes. It is against a background of these developments of the last ten years that we must view changes in health status and health care.

State of Health Care in Mozambique before Independence

Health service before independence had the characteristic features of health care under colonialism. There was economic, racial and geographic discrimination. Health facilities were predominantly urban and in White settler areas—over ⅔rds of the doctors in 1974 were in Maputo. Auxiliary diagnostic facilities were available only in three cities. Private health care was available only to a privileged urban bourgeoisie. Even within the public health care system fees were charged for services as the basis of race. Social discrimination was practised in all hospitals and services were separate to Blacks and Whites. With the emphasis on lucrative private practice, curative medicine developed to the detriment of promotive and preventive health care. Major public health programmes were taken up only sporadically or under pressure from the international community.

Typically, as elsewhere, the country was purposely kept underdeveloped—people had little access to educational or other facilities. Mozambicans were a source of cheap labour, especially in mines in other countries. Police and military authorities were used to repress progressive ideas and movements.

Medical Training

The first medical school was set up in 1963 and the first doctors graduated in 1969—the students being drawn mostly from the elite. Of 122 graduates before independence only two ever joined public service. The training which was for seven years was archaic and outmoded even by existing European standards with "excessive theorisation" and lack of practical training. What little there was of "practical" training comprised thoeretical demonstrations in the presence of patients. Basic laboratory methods were not taught, but diagnosis according to the trainers, depended upon sophisticated laboratory methods.

Pharmaceutical Industry

Mozambique had no pharmaceutical industry of its own—all drugs were imported. The six supplying countries were Portugal, Switzerland, West Germany, South Africa, France and UK. Over-invoicing, monopolies for supply of certain drugs, etc, were typically rampant. Most TNC subsidiaries showed large deficits. The government drug budget was $ US 1 milion in 1974 for a population of 9 million—average of US $ 0.11 per capita. Any drug regulation was virtually non-existent. Almost the only drug ever banned from being imported was thalidomide. Most drugs were available over the counter irrespective of their potential hazard.

Health Care in the 'Liberated Zones'

Even at the outset when the armed struggle for liberation began in 1964, the health of the fighting people was a major concern. First aid assistants and rural medical aides were trained and supported by one doctor and a few nurses. As the struggle developed into a 'popular democratic revolutionary' movement the colonial administration collapsed in many places. Invariably, the destruction of health services accompanied the withdrawing of colonial authority.

In these 'liberated zones' FRELIMO took over the responsibility of administration and building new structures to govern the areas. One of the first such services the FRELIMO was compelled to set up were health care facilities. In the beginning the liberated zones were divided into smaller administrative units. In each geographical administrative unit were built health centres and hospitals using locally available materials. A hierarchical network of health units was created. These health facilities became particular targets of attack. These units had to be built in the forests and even there they

were constantly under threat of air attacks which included napalm bombing. Education and health facilities became priority areas of concern. Ambulatory services were also provided in remote villages and also so as to protect the health structures from being detected by the colonial army—which would have been likely if obviously ill people had had to move over distances to come to hospitals.

However, the lack of adequate personnel for providing health care led to innovations and the training of local people. Political and military training of course preceded health training. Neither the militants nor any other category of worker received salaries at this stage.

Attached to these larger health units was a farm where land was worked and food produced collectively by everyone. These hospital farms played a very important role in defining a more realistic concept of health—health was associated not just with the curative process but with production and proper distribution of the right kinds of food.

Once the liberation movement gained strength and the colonial structures began to break down rapidly, constraints regarding resources and personnel became more acute. It was at this point that it was acknowledged that the preventive measures would considerably ease the pressure on curative facilities which was becoming acute due to lack of resources. Military personnel began to be trained as 'sanitary agents' and health educators. Over a million people—almost the entire population of the liberated zones—are claimed to have been immunised against small pox and cholera in this period.

Post Independence Development

The experience gained during these years was attempted to be generalised even during the phase of the transitional government. In the health sphere this was a period of confrontation in many ways between the health workers trained in the liberated zones and the university trained medical personnel. The concentration of sophisticated equipment and the razzled dazzle of medical technology often undermined the confidence of the 'new' health personnel. The attitude of the university trained doctors was both openly challenging and subversive. This group, both nationals and foreigners with its technical expertise and its class background played a significantly detrimental role.

The decision to nationalise health services was therefore an urgent necessity, especially if access to health services were to be open to all without class and race distinction. Secondly, these measures were necessary to stop "misfortune and diseases" from being "motives for exploitation". And thirdly, it was only with this decision that it became possible to "ensure the reprioritisation within health care" and ensure that the curative component of health did not mask the relevance of the socio-economic roots of ill-health of disease. Most importantly, the role played by doctors and the medical establishment was becoming a threat to the liberation movement. In nationalising the services, president Machel aptly described doctors as "social parasites" and "traitors" who dispensed medicines "like beer from a bar".

An immediate consequence of this nationalisation was an exodus of doctors from Mozambique. Only 60 doctors remained in the country by October 1975 together with about a 100 medical students and teams from North Korea, China and Bulgaria. Two years before there had been 300 doctors, almost all White. Of the teaching staff of 96 in 1973 only 14 remained—of these only five opted for Mozambican citizenship.

In 1977 a new National Health Service (NHS) was set up and a new health policy defined and evolved certain priorities:

Preventive medicine and environmental sanitation and primary health care:

Extending health coverage, the top priority being given to "communal villages" which were being constructed incorporating agricultural co-operatives, medical care, family planning, occupational health and school health programmes..

Strategies for controlling major epidemics—TB, leprosy, schistosomiasis, sleeping sickness, blindness, intestinal parasitosis with the diagnostic and prophylactic measures, defined.

Evolving a health team approach with new categories of personnel.

And most importantly, ensuring and encouraging community participation.

In 1977, to provide a basis for changes in the health structure and the redefining of personnel a pedagogical seminar was held with doctors who had been exposed to health problems in the liberated zones. It was decided that the doctors of the future were to be able to organise, lead and train a health team and act as a 'health agents' to transmit health concepts to people. A new curricula was designed to suit the purpose. A community orientation in even those subjects which had hitherto had a clinical approach was attempted. However, the leader of the health team, it was proposed, would be a 'graduate in health services' and not a 'doctor'. Specialisation would be after 2-5 years in primary health care work at the community level under supervision. He/she would then be called 'doctor in health sciences'. This concept of the 'doctor' as the leader of the health team has undergone some change. By 1981 attempts were being made to 'democratise' the decision as to who should lead the team. Also, there was provision now for horizontal mobility. But these changes aimed at diluting the rigidity of the hierarchies in the health system were being opposed vigorously by doctors.

There were other problems in bringing about such radical changes in the concepts of medical education. There was only one training school for doctors and this could not be closed. Secondly, any change in the medical education curriculum had to be such that the final qualifications would be recognised by the world medical community, as well as sceptical elements within the country.

Drugs for All

By 1978 a new pharmaceutical policy had also been adopted which has been resoundingly successful. It was directed at reinforcing national economic independence; a new pharmaceutical regulatory system was established to check the flow of drugs into the country; the NHS was to develop adequate structures for the management of drugs.

A new Pharmaceutical Service was created in 1975 under the ministry of health. A Theraputics Expert Committee (CTTE) was established as well as a central agency for medicines and medical supplies. A new law was passed compelling drug agencies to re-register their products, and firms were told that the government wished to see as few products as possible in the market. However, their compliance was entirely voluntary. In the months that followed the 'request', the number of products in the market fell from 13,000 to

2,600. It also earned the government US $ 70,000 through registration fees.

By December 1976 the CTTE had produced a new national formulary 10 months after the WHO's first report on Essential Drugs. It listed 640 items comprising 430 therapeutic substances, 20 diagnostic agents and 14 dressings. A second revision of the formulary was published in 1980 which contains only 502 items.

Prescription rules were also established, one of these being that all prescriptions were to use generic names. In 1981 a study of 4,000 prescriptions showed that 33 per cent were in accordance with the National Formulary rules. Compliance was lowest in the casualty department of the reputed Central Hospital in Maputo where there are health personnel from various countries who are not familiar with generic names.

A state corporation MEDIMOC has also been established for drug procurement by the merging of five private import companies which had been abandoned by their foreign owners. By 1981 60 per cent of the drug procurement for NHS was being handled by MEDIMOC. The new drug tender system had also accounted for a 41 per cent savings on drug purchases. In 1977 a state corporation for the retail sales of drug was also formed to ensure availability of quality drugs.

The creation of a national pharmaceutical industry is one of the objectives decided upon at the Third congress of FRELIMO in 1977. Preparatory studies are under way and a small ORS plant has been set up. The government pharmaceutical budget has gone up from US $ one million in 1974 to $ 12.5 million in 1982 accounting for 20.1 per cent of health budget from 8.1 per cent in 1974.

Conclusion

Given the fundamental conviction that everyone has a right to health, the actual realisation of the political nature of the skewed distribution of health facilities came about through FRELIMO's experience in liberated zones. Not only were health facilities the targets of the colonial army, the medical establishment's support to the government acted to strengthen anti-people measures. The denial of health care to people on the basis of class, race or sex was not a matter of chance but a deliberate measure by the colonial rulers to suppress and undermine the development of the revolutionary potential of the masses. Nationalisation of health services was an important act not only because it would ensure that health care would be more accessible to people but because the measure effectively nullified the subversive nature of a discriminatory health system and deflated the potential influence the medical establishment could wield over the masses.

However, implementing changes that strike at the social status of doctors has not been easy. Although there does not appear to be any reporting on this aspect, there is reason to believe that dissatisfaction among doctors regarding their remuneration and social status has been rising. The idea that a doctor may be just one of a health team and not its leader will take a long time to be accepted. Another feature of the health system which is not much discussed appears to be the notion of community participation. While the 'health agent' is selected by the 'community', it is not clear as to what is the extent of their participation. Mozambique's 12 million people speak 12 languages and 21 dialects and also belong to numerous different tribal groups. In such a situation only a determined effort at decentralisation can ensure that community participation will be a fact rather than a notion. Moreover, the persistent activities of the MNR have made this even more difficult to achieve.

There is also some indication that the emphasis on primary health care and the balancing of resources between it and more sophisticated hospital oriented services may be under some strain. For instance, the incidence of heart diseases which often necessitates hospital care and even surgical measures, may be rather high. In a health census of six villages the incidence of hypertension was 33 per cent in the coastal villages and 25 per cent inland. The 1,800-bed hospital in Maputo has highly sophisticated cardiac service with one of the three theatres being reserved exclusively for it. Whether this is a genuine response to health needs or a matter of 'prestige', especially considering the close association of some of these surgeons with the famous South African heart surgeons is not clear.

Another area about which little is said is the status and use of local/tribal health practices. Although some of the local doctors have been retrained as health agents, this does not mean that local practices, if they have survived at all, have been integrated. In fact, this is very unlikely. The emphasis has been on using modern preventive and promotive measures—immunisation, nutritional inputs (which has hardly got off the ground) popularising the use of latrines, use of 'clean' water, etc.

It is Mozambique's drug policy which is an unqualified success. Prices of drugs have fallen since 1977; they are being made available to an increasing proportion of the population and there has been a drastic curtailment of unnecessary and toxic drugs. The policy is under periodic review and revision. But the development of an indigenous pharmaceutical industry will bring other problems—of imports of machinery, raw materials, of wages and ultimately, of cost of drugs. These are, however, not insurmountable problems.

Even ten years after independence Mozambique has to cope with constant threats to its very existence as a state necessitating heavy military expenditure it can ill afford. It is dependent on imports of grain to feed its drought-struck population. Despite all this, it has so far succeeded in establishing a framework for the provision of rational health care to its population.

[*Acknowledgement*: Some of the information (and insights) is from interviews with Dr Carlos Marzgao in 1983.]

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UPDATE

news and notes

Health in Seventh Plan: Boost to Private Sector

IF recommendations of the Bhore Committee (1946) are to be considered as some kind of a bench mark for health planning, then one has to admit that all the plans for the health sector, including the latest one, have failed to live upto it. For instance, the Bhore Committee has suggested that for a population between 10,000 and 20,000 there should be a 75 bedded Primary Health Centre (PHC) which would provide coordinated preventive and curative services through doctors, public health nurses and health assistants. However, 40 years later even the 6th Five Year Plan (1980-85) target of one PHC with only seven or eight beds for a 30,000 population is far from realisation.

Implementation of health sector plans have never been taken seriously because:

a. The health sector is not considered a priority area of development by the government. Since the power base resides with the kulaks upon whom the vast rural landless and marginal and small farmers are dependent for their livelihood state resources are mainly used to strengthen the surplus appropriation capabilities of the kulaks and the bourgeosie.

b. The private health sector and the system of private practice of medicine has prevented the government from appropriating the medical and health functions by providing sops such as 'charitable hospitals' and 'voluntary hospitals' that provide 'concessional' care.

c. Government planning and programming has never taken into account what the actual requirements of the people are—people have always been 'given' what the government thinks the people want, and even that does not reach the people; and

d. The Government's obsession, under the influence of imperialist agencies, in planning and implementing health programmes, has always been with family planning.

The Seventh Five Year Plan (1985-90) in the above sense is no different from the earlier plans. It provides an even more vigorous support to the private and 'voluntary' sectors and the entire focus is on improving the management of the various programmes under the health sector. And the historical trend of a reduced proportional allocation to the health sector is continued.

In the first five year plan the health sector constituted 3.82 per cent of the total plan outlay but began to decline in each subsequent plans—3.01 per cent, 2.63 per cent, 2.12 per cent, 1.92 per cent, 1.86 per cent and 1.88 per cent. That this decline in health sector allocation is due to greater investment in population control activities is obvious from the fact that allocations to the family planning (FP) sector have increased from 0.005 per cent of total plan outlay in the first plan to 1.80 per cent in the Seventh Five Year Plan. Even the ratio proportion of allocation between FP and Health Sector has increased from 0.002 to an astounding 0.96 per cent between the First and Seventh Plans. A correlation between the percentage allocations to health and FP over the Seventh Plan periods shows a high negative correlation (Pearson's r) of -0.88. Along with the narrowing ratio gap between health and FP, this r value is a clear indication that the growth of the public health sector has been sacrificed in favour of family planning activities.

Reviewing the performance of health programmes the Seventh Plan document states that, "Most of the concerned (disease) control programmes suffer from poor management and monitoring... Health management support and supervision is an area that needs considerable strengthening."

Further, the Seventh Plan emphasises the need to provide greater support to the voluntary sector in both health and family planning. This is in keeping with the promise given in the National Health Policy of 1982, 'The policy envisages a very constructive and supportive relationship between the public and the private sectors in the area of health by providing a corrective to re-establish the position of the private sector' (India, 1985).

That the focus of the health sector will continue to be family planning activities is made clear by the following statement in the Seventh Plan document *intersectoral co-ordination and co-operation and the involvement of voluntary agencies in the programme (of the government) will be necessary in this (FP) programme to an even greater extent than in health.* Add to this the large allocation to the family planning sector of Rs 3,256.26 crore which as a proportion to the health sector allocation of Rs 3392.89 crore is the highest ever (proportion = 0.96).

Another important feature of the health sector in the Seventh Plan is its recognition of non-communicable diseases as an important area for development; "Development of specialities and superspecialities will need to be pursued, with proper attention to regional distribution." Whereas with regard to the highly prevalent communicable diseases, they mainly affect the deprived masses, the Seventh Plan document stops at saying that the programmes have failed in achieving their targets and therefore only better management is the answer.

Related to the focus of diseases of the priviledged few the plan recommends a special priority to new medical technology, especially biotechnology and electronics. The special attention that AIDS, cancer and coronary heart diseases are receiving and the current boom of the diagnostic industry is a clear indication

where the health sector priorities lie.

Finally, it is interesting to note that the health sector plan does not comment on the drug industry on which the national disease control programmes are greately dependent. Drugs and pharmaceuticals are left to the Industries sector where no mention of essential drugs is made. Even with the major communicable diseases being national programmes, (leprosy, tuberculosis, malaria, blindness, filariasis, goitre and guinea worm infestation) there is no concern in the plan document about shortages of these essential drugs which are imported in bulk inspite of a sophisticated pharmaceutical industry in India.

Ravi Duggal

Local Health Traditions and Primary Health Care

LOCAL health traditions are primarily based in the use of local flora, fauna and minerals. A very significant aspect of the local health traditions and its practitioners is their self-reliant nature. These traditions are of an entirely autonomous character rooted in a community's social traditions of knowledge and supported from within the community. No government or any other agency has ever been required to offer any direct support to these traditions of health-care. A seven-day meeting was held in November 1985 at Karjat, Maharashtra, to discuss ways for strengthening local health traditions related to primary health care. People from 30 rural organisations interested and active in the community health field from Kerala, Tamilnadu, Andhra, Karnataka, UP, Bihar, MP and Maharashtra attended the meeting.

Most of the groups previously carried the prejudiced impression that local health cultures were based on blind belief or purely an empirical experience because this is the false propaganda that western science had spread about indigenous knowledge. In fact, to date not a single serious evaluation exists of the strengths and weaknesses of any local health culture in any part of India, despite the fact that millions of Indians still subscribe to traditional health practices. There is evidence to establish that Ayurveda is the scientific mainstream behind all the local folk and tribal health traditions in India. There appears to be a symbiotic relationship between the two. The mainstream drawing strength from the particular experiences of numerous local streams and the local streams in turn being enriched through interaction with the mainstream.

The meeting observed that a sort of cultural genocide (which began about 200 years ago) on the local health culture of thousands of village communities is yet taking place in independent India. This is inspired by the Western ethno-centric outlook of the Indian scientific establishment. Ironically although local health traditions are in fact more comprehensive in scope and cover all and more than the usual elements that are expected from the 'primary health care' programmes of the government, these local traditions are being totally ignored and suppressed.

When one talks about the scientific temper in India, we usually impose an essentially European 'mainstream' cultural tradition (Europe also had non-mainstream scientific traditions, e.g., based on writings of Goethe) on the Indian people. There is in fact also an indigenous scientific temper that still persists amongst millions of our rural folks and amongst the tribals. This indigenous scientific temper is indeed very different in content and form from the European one and it is only cultural arrogance and intolerance that may make us blind to its value.

Strengths and Weakness of Local Health Traditions

In the Karjat tribal block over the last 5 years a detailed documentation of the local health tradition is being undertaken. Similar work is being conducted in other parts of Maharashtra (Nanded district, Gadchiroli and Poona district), as also in Warangal in AP, Ranchi in Bihar and Coimbatore district in Tamil Nadu.

Although the local traditions are comprehensive in their 'scope' they undoubtedly reveal several weaknesses in treatment procedures and diagnosis when subjected to critical evaluation by the science of Ayurveda. Although with regard to the use of local herbs the local tradition has an amazing knowledge of local flora its ecology, identification, types, etc, knowledge about properties of plants is incomplete. There are perhaps several reasons which may explain how and why these weaknesses have set in—in the first place the local traditions are 'oral' traditions of knowledge and in the natural course of things oral traditions the world over have been found to decay over 'time'. They need to be revitalised from time to time in order to regain 'vigour'. An external reason for the current decay of local traditions is the derision, neglect and oppression they have suffered due to the intolerant attitude of the western scientific tradition towards these practices. A third reason is the break of active links during the last few centuries with mainstream science of ayurveda. This has resulted in mutual losses. These weaknesses however do not detract from the comprehensiveness of the local traditions, nor reduce their potential for making the community self-reliant in its primary health care needs.

Workshop Report

Documentation of Local Flora: On the first day participants accompanied by the botanists from 'Maharashtra Association for Cultivation of Science' and AVR Educational Trust, Coimbatore, visited the local forest and collected 25 illustrative specimens of locally used medicinal plants. There were detailed discussions on the basic botanical notes that should be taken about each plant and what parts of a plant are essential to collect for purposes of identification and how plants can be pressed and dried and put into herbarium sheets.

On the same day, in the evening there was an introductory talk on Dravya-Guna Shastra which is

about the theory and methods by which Ayurveda establishes the properties of plants and predicts their effects on the human body.

The next two days of the workshop were spent in observing and participating in the preparation of medicines by processing plants in various ways. Nine different basic techniques of processing of plants were demonstrated *viz*, kadha, swaras, tel, ark, ghanwati, shar, satv, malam and choorna.

Documenting Local Health Care Practices: Two days were spent on understanding some of the strengths and weaknesses of the local traditions regarding (1) mother and child care (2) home remedies and (3) the treatment of common ailments and first aid. The ADS presented participants with a copy of the type of questionnaire they had used to study the local traditions which could be used as general model for similar studies elsewhere—but the detailed format may vary from region to region.

Food and Nutrition: The sixth day was spent in discussion on two subjects, *viz*. the basic natural principles of ayurveda and the ayurvedic theory of nutrition. As a result of this western ethnocentric view, today under the banner of spreading science to villages, very many sound nutritional practices of villagers are being destroyed and undermined because of lack of understanding of the Indian nutritional science.

On the seventh day there was discussion around the historical analysis of the colonisation of the Indian mind by the mainstream west—a process which began 200 years ago and continues even today under a political leadership which wants India to 'catch up with the west' in the 21st century. A view was put forward that perhaps it was at a historical moment of weakness that the Indian civilisation accepted the cultural and inellectual traditions of their colonisers and that this acceptance was not based on any critical process of evaluation of the western traditions.

It was unanimously resolved to form an informal national committee, the Lok Swasthya Parampara Samvardhan Samiti for strengthening local health cultures. The AVR ayurvedic trust, Coimbatore, agreed to act as the secretary of the committee.

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Drug Multinationals and WHO

THE unofficial, information links between multinational corporations and some UN agencies have long been debated. The ICP (Industry Co-operative Programme) within the FAO was a prime example, and had to be dismantled once the links were discovered by action groups. On the other hand, the WHO prescription for a rational drug policy is well known, has been recommended for *all* countries, developed and underdeveloped and is often adduced as proof of the WHO's neutrality. Its prime principal contribution has been the selection of a list of essential drugs numbering 250, and which the WHO has suggested is more than adequate for a population's basic health programmes, a list, of course, that has not enamoured the WHO to the drug multinationals.

The new drug policy has reversed many of the offensive features of the drug scene available in most third world countries including India, where the production of a large number of inessential and harmful drugs has led to a decline in the production of basic and essential drugs. Despite what critics of the Bangladesh drug policy, instigated by drug MNCs have claimed, the new policy has led to an increase in the production of essential drugs, has reduced prices and improved drug investment by the very same companies who have tried to criticise the policy in the past.

Concerned about these positive developments and their possible impact on other third world countries, the drug MNC have now recruited a Sri Lankan lawyer to write a book attacking the policy. The book is entitled, *The Public Health and Economic Dimensions of the New Drug Policy of Bangladesh,* is written by D C Jayasuriya, and sponsored by the apex organisation of drug multinationals worldwide: The International Federation of Pharmaceutical Manufacturer's Association.

Jayasuriya uses his former WHO consultancy status to give his 'evaluation' of the Bangladesh drug policy some measure of legitimacy, which it, being a sponsored study, readily lacks. The document is being passed about as a 'WHO document on the Bangladesh Drug Policy'.

More interesting is the fact that the document has been sent to the personal addresses of Drug Controllers, Health Ministers and other influential administrators in all Third World countries. This has not however been done in Bangladesh, where a whisper campaign instead has been let loose to say that the "WHO has published a document against the drug policy." The WHO is obviously aware of these developments and has yet not distanced itself officially from the Jayasuriya 'evaluation'.

The requisition of a Third World individual to attack a socially useful policy from another Third World country, at the obvious behest of drug MNCs is deeply disturbing. No action has been taken against Jayasuriya despite the fact that these developments have been brought to the attention of the Director General of the WHO, Dr Halfdan Mahler himself.

We believe that part of the reasons for the incapacity or unwillingness of the WHO to act firmly is rooted in the financial indebtedness of the WHO to countries like the USA. For example, it took a full two years before Dr Halfdan Mahler himself publicly approved the Bangladesh drug policy. There is need for more unambiguous approach. If necessary, the WHO should seriously consider alternative sources of funds to act more forcefully in the interests of all drug consumers.

Even now it is ironic that the WHO is unwilling to act when it sees an attack on a drug policy that is based on the recommendations of the organisation itself.

Third World Network

Homoeopathy

b k sinha

Homeopathy, the author contends, goes well with the holistic health movement and holds the promise of making necessary medicines available to all.

HOMOEOPATHY is today's medicine because it offers a way out from the situation the people in need of medicine face. One of these problems is the cost. Treatment has become terribly costly, forcing an overwhelming majority of people to suffer helplessly or succumb to diseases. Homoeopathic treatment is much cheaper. The manufacture of these drugs does not involve the kind of technology which would lead to monopoly and consequently to cost escalation. Besides, the action of homoeopathic drugs does not depend on the quantity of drugs administered but on potency and higher the potency, the less there is of the medicinal matter in it. And one of its basic principles is to keep the dose of the medicine to the minimum.

Homoeopaths prescribe drugs on totality of symptoms. This saves the ordeal of going through surgical operations in most cases. Its principles for treating a group of symptoms have been tried and tested in the last 175 years and its structure is such that new information can continually be incorporated into the existing body of knowledge. And the logic behind these principles is such that it avoids logical contradictions of other systems of treatment by elevating the concepts of health, disease and cure to a level where these contradictions do not operate.

In all societies and in all ages, human beings face concrete problems and is oppressed by them. Consequently, they endeavour to solve them and to understand them. The understanding of the problem is crucially dependant on the tools that they possess including the power of abstraction. Both these tools and power of abstraction crucially depend on the state of development of the society. Within this limitation, there is yet another limitation: that of the class nature of the problems and following from it the class nature of the solution advanced. If the problem of study stems from the class needs of the ruling class and the solution to it does not question the beliefs and ideas justifying the existence and the privileges of the ruling class, the individual studying these problems and advancing solutions get support, recognition and glory from the ruling class. If these bases are questioned, such individuals incur the wrath of the ruling classes and are dealt with accordingly. If the questions studied and the answers advanced are such as do not interest the ruling classes, howsoever beneficial they may be to the advancement of the society as a whole, those are simply ignored till a class comes to recognise their usefulness, either as the ruling class of the day or as a class in struggle against the ruling class for supremacy and power. It goes without saying that societies whose ruling class in certain periods of time either suppresses such studies and solutions of the problems or ignores them is condemned to stagnate and degenerate. Historically, we see two types of development that take place in societies condemned in this way, depending upon the level of development of the society in question. If because of the development, such a class has emerged in the society which could withstand persecution, the task of developing society drives many individuals to take up such study notwithstanding the persecutions. The ruling class is then replaced by another ruling class which enables the society to develop further. If, again because of the level of development of the society, such a class has not emerged which could withstand persecution, it leads to various kinds of distortions in the existing body of knowledge of the society and to an ever increasing difficulty in procuring the means of life from surroundings, to maintain its existence and that of the ruling class. If the natural surrounding of such a society is bountiful, it manages to keep itself alive despite its stagnation and consequent distortions in its consciousness; if not, such societies must perish leaving the marks of their existence on history.

An individual's response to the problems faced has elements of both universality and particularity. Universality, because the basic problem sought to be solved and the tools of enquiry at a specific stage of development are universal. Particularly, because the answers to these problems are in terms of what is available either from nature or from what is inherited from previous generations. Hence the element of particularity is to a minimum level in primitive societies. It is for this reason that different societies existing at different points of time and space and drawing the necessary means of life in a similar method and ways tend to enquire into the problems they face in similar ways and arrive at similar answers. At a certain point of time and space, if there is a change in a society's methods and ways of procuring the necessary means of life, its ideas about the problem it faces, its tools of enquiry and the answers it advances for its solution too change, in the main. But societies where this change has not taken place continue to live in the old ways with their old ideas.

Health and freedom from illness is one of the most basic human needs. Primitive response to this need is universally magical. It could not but be so. For it was a long time before human societies could even pose the problem properly and did not possess even the elementary tools to enquire into the problem. Later, as experience accumulated abstractions of experience as beliefs and theories were put forward. Hence we see the sprouting of different systems of treatment in different societies. Some of these systems have survived to this day although they could not remain unaffected by the development of science and logic either in their own society or in other societies they came in contact with.

Besides, the human endeavour to fulfill health needs and discover cures for illness directs enquiries into various aspects of the problem including the human body, cause of disease, effects of drugs, hygiene, etc. The answers to all these questions must be limited by the tools available and must at the same time reflect current beliefs including taboos. Besides, the less developed the tools, the greater the grip of beliefs and taboos. On the other hand, the greater the stakes behind these beliefs and taboos, the greater the force with which they are defended. Hence any of the systems of treatment needs to be evaluated for its objectivity, not on the basis of its own 'theories' and beliefs, not on particulars, but on the basis

of science, on the basis of what is abstracted from the particulars, the universal.

If we look into the systems of treatment practised in ancient civilisations like the one in India (Ayurveda), China and Greece we find that each identifies the cause of disease differently. While Ayurveda identifies *vayu, pitta,* and *kapha* as three doshas, a disordered state of which afflicts the body with diseases of various kinds, the Chinese system identifies the balance two opposing principles—the *yang* and the *ying*—and an imbalance, therefore, meant diseases. Similarly the Greeks believed that when the four humours—blood, phlegm, yellow bile and black bile—were in balance, there was a state of health; when not, diseases resulted. Rome, after conquering Greece, based its system on Greek system but Roman physicians developed the system immensely.

Even a cursory glance at their history reveals that the inner vitality of these systems which propelled them to acquire new experience and propound theories is subsequently plagued. The loss of vitality of these systems reflects the loss of vitality of the civilisation and societies which gave rise to these systems. A period of stagnation followed. The reason is simple: the then ruling class in all these societies had become parasitical in course of time and therefore its relation with scientific enquiry had became antagonistic. Consequently, scientific enquiry was discouraged and scientists were persecuted. This is brilliantly underlined by D. P. Chattopadhyaya in his works (Chattopadhyaya, 1976, 1977).

European historiography describes the period 600–1400 A.D. as the Dark Ages of medicine. Dissection of the human body was prohibited. "The history of Europe in those days is the history of typhus and plague, of rats, lice and men... The lack of scientific knowledge promoted superstition in medicine. Saints were invoked for the curing of disease—St. Clare for sore eyes, St. Sebastian for plague, St. Appolonia for toothache, etc (Nelson, 1927).

Science having been tabooed elsewhere, Arabia came forward to take science and medicine to new heights. They preserved Greco-Roman wisdom, further developed it and enriched it with new drugs. Their contribution in the field of pharmacology is great. The system of medicine they gave rise to is known popularly as Unani system. But later, their civilisation and along with it their medicine fell into a period of stagnation much as in other societies and for mostly the same reasons.

Thanks to the maturing of merchant and manufacturing capital in some societies, not only the persecution of scientists came to an end but they began to receive state encouragement. Individuals came forward in many fields of activities including science, logic, medicine and so on, who could be compared with Columbus in their fields. Beginning with Fractorius and Paracelsus, a galaxy of physicians shed new light on various aspects of the human body and diseases. Newton and Bacon widened the horizon of human thought to an unprecedented level. Further development of knowledge came to depend crucially on the development of a logic and based on it the classification of the existing knowledge. In the field of zoology, it was taken up by Cuvier and in the field of pathology by his contemporary, Hahnemann, the founder of homoeopathic system of treatment. But Hahnemann did much more than attempt to classify diseases—he developed a logic which put forward different concepts in relation to diseases, cause of the diseases, medicines and the way medicines act and advanced several hypotheses which were later substantiated by different branches of science.

In Hahnemann's days therapeutic practice was appaling. Stuart Close says:

> Ideas which now seem absurd were then matters of the most serious moment, and in their practical working out often became tragical. Blood letting, the outgrowth of one of these false theories affords a good example. The celebrated Bouvard, physician to Louis XIII, ordered his royal patient forty seven bleedings, two hundred and fifteen empties or purgatives and three hundred and twelve clysters during the period of one year ... the death of our own George Washington was undoubtedly caused by the repeated blood-letting to which he was subjected. He was almost completely exsanguinated (Close, 1979, pp 28-29).

Nature of Scientific Enquiry

Science studies nature in general and within this universality, the different aspects of nature, the particularities. All scientific enquiry reflects nature more deeply, truly and completely. But what exists in nature is matter in motion. Hence what science studies is different forms of matter in motion, scientific judgements and concepts relate to it and therefore are needed to be placed at different levels.

To illustrate the point: The simplest form of motion is change of place—mechanical motion. But there is no such thing as motion of a single body although motion towards a centre common to many bodies can be treated as such. But as soon as a single body moves in a direction other than towards the centre, the laws of falling to which it was subject, undergo modifications:-

a. As laws of trajectories and lead to reciprocal motion of several bodies, planetary motion, equilibrium in motion itself. But the real result of this kind of motion is ultimately the contact of moving bodies—they fall into one another.

b. As laws of bodies in contact—ordinary mechanics, livers, inclined plane, etc. But the effect of the contact is not exhausted by these. Contact is manifested directly in two forms: friction and impact. Both have the property that at certain degree of intensity and under certain conditions, they produce new effects like heat, sound, electricity... no longer mechanical effects.

c. As science of these forms of motion—physics. It establishes the fact that under certain conditions, they pass into one another and at certain degree of intensity which varies according to the different bodies set in motion produce effects which transcend physics, changing the internal structure of the bodies—chemical effects.

d. As science of chemical nature and internal structure of bodies. Its task becomes to prepare these substances artificially and it subsequently prepares the ground for dialectical transition to the organic sciences... (Marx and Engels, 1953, pp 342-43).

We thus see that all these branches of science study the particularity of contradiction and are differentiated on this very basis. These contradictions are rooted in the objective world and are independent of human will. And human thinking is a subjective relfection of the objective world. But human thought may or may not reflect the objective world correctly. The contradiction between a correct and an incorrect reflection of the same thing in nature gives rise to another type of contradiction—logical contradiction. Appearance of a logical contradiction in human thinking means that the thought is not correct and development of thinking depends

upon its solution. But for this, it must be separated from dialectical contradictions—the contradictions existing independently in nature. But given the nature of human knowledge and the way it has advanced, logical contradictions too are mistakenly treated as dialectical contradictions and pose difficulties for separating the two. Besides, it can be separated only on the basis of practice. But the word practice has to be understood clearly—it is different from what can be termed as 'naive practicality'. For practice to be correct, it has to be guided by theory and the latter must correspond to the level at which the contradiction operates.

Consider an example. Euclidean geometry grew out of practical activities spanning centuries. Its axioms and theorems are still found correct and serve our needs. It served Newton's needs as well when he was formulating his laws of gravitation. Newton's laws of gravitation are one of the greatest triumphs of science. But he could only describe gravitation, he could not explain it; limited as he was by the level of science of his day. Explaining it would require on the one hand, such fundamental advances as the development of the concept of fields, the creation of electrodynamics and the theory of relativity. It would also require, on the other hand, a deeper approach to natural science, its methods and problems. But when one begins to explain gravitation, one simultaneously begins to see the contradiction inherent in both Euclidean geometry and Newtonian mechanics. This of course, does not mean that Euclidean geometry or Newtonian mechanics are wrong; they are very much correct within their own limits. The confusion arises only when their limits are violated.

Hahnemann's Contributions

Hahnemann lived in an age in which he could ask questions and provide answers only in the hypothetical form; he could not back up his hypothesis with exact experiments, nor could he express himself in the exact language and terms of science. The problem was compounded for him as he enquired into complex subjects like health, disease, cure, action of drugs, etc. He could bank only on his power of observation and abstraction and could draw but little from his predecessors. The competence with which he founded his therapy is amazing. And in so doing, he gave a new interpretation of these concepts, applied some of the known principles in a different way and developed his system of cure.

It was Hahnemann who gave the name allopathy to the system which was practised in his time. In his time, quite like the present, treatment generally proceeded on the principle that a disease or a symptom of disease is cured by using a medicine that opposes the symptom, either by direct suppression or by inducing a reaction leading to its suppression. Even the descriptive terms for drugs with prefix "anti" indicate the principle on which they are prescribed. He opposed this principle and called his system homoeopathy. The basic principle of homoeopathy is stated in a phrase: "Similia similibus curentur" or "Like shall be treated by like".

Hahnemann was not the first to propound this idea. It had been expressed by thinkers and scientists from ancient times. He acknowledged his debt to Hippocrates, in whose writing the principle of "like cures like" appears. In ancient Indian philosophy we find a similar reasoning advanced by Uddalak Aruni in Chandogya Upanishad, "The essential nature of the cause is to be inferred by the essential nature of the effect" (Chattopadhyaya, 1976, p 477). But this principle in itself could not have taken Hahnemann beyond Hippocrates. As it constituted a part of the complex whole he was reasoning, it propelled him to go further and devise suitable means for its application.

Allopathy and other systems of medicine believe that the cause of the disease must be diagnosed before to determine proper treatment. But knowledge of the cause of the disease depends on the level of theory and the available tools of investigation. A further deepening of knowledge must therefore invalidate old therapeutic practice which is only logical and sound. But the cause of the disease is too complex. Disease, like health, is influenced by a number of factors in complex combinations. This constitutes a logical contradiction and leads to unsound therapeutic practice. James Krauss says:

> It is impossible to know all the antecedents causative of disease consequents. ... How then shall we remove or palliate these effects by medical substances? Here, Hahnemann steps in to say, 'remove the effects and you remove the disease'. We must apply medicinal substances on the basis of knowledge of their actual effects which we have ascertained and know. Disease effects are removed by the application of medicines having corresponding medicinal effects. Scientific comparison of disease effects and medicinal effects for application leads to the diagnostic inferences of scientific medicine, makes scientific medicine possible (Krauss, 1979, p 9).

Besides, Hahnemann had observed the opposite action of large and small doses of medicine. Ipecac in large doses caused nausea and vomiting and in small doses, under certain condition, cured it. This held good for a number of drugs then in use. This observation led him on the one hand to anticipate what was later discovered and formulated by the Arndt-Schulz law, an allopathic rule formulated towards the end of the nineteenth century. On the other hand it led him to propound the theory of potentisation or dynamisation.

Potentisation is a process of dilution and vigorous succession at each stage of dilution. If the original medicinal substance is soluble in ethyl alcohol, the starting point is a concentrated solution called mother tincture (O). If it is not, then it is triturated with 99 parts (in centisimal and decimal scales of dilution respectively) of milk sugar. After this initial trituration, one part of this is again triturated with 99 or 9 parts of milk sugar depending upon the scale. After third trituration, he observed, the medicinal substance becomes soluble in alcohol. [Triturations therefore anticipate the development of colloid chemistry.] It is then treated like soluble substances and further diluted to reach higher potencies.

Dalton's atomic theory and Avagadro's hypothesis were known in Hahnemann's days. The atom was not considered to be divisible by the former and according to the latter, one gram molecular weight of any compound or element contained approximately 6×10^{23} molecules. Therefore, if one gram molecular weight of any substance, say for example 48.46 gram of sodium chloride (natrum muriaticum) is dissolved in 99 parts of water then the solution will contain 6×10^{23} molecules. If one part of this solution is diluted in 99 parts of water then the solution would contain 6×10^{21} molecules assuming that the solution is thoroughly mixed. Second dilution will leave 6×10^{19} molecules. If we go on then a stage will be reached when the number of molecules present in the solution will be 6×10^{1}. At this point if we take a hundredth part of the solution then the number of molecules will be 6×10^{-1} or 0.6. It means that beyond 12th.

centesimal or 24th decimal potentisation, not even a single molecule of the original substance is there in the medicine. But the more commonly used medicines are 30th and beyond.

Hahnemann was aware of this paradox. He advanced the reasoning that the process of dilution and succession released a "spirit like power". Stuart Close adds, ". . . homoeopathic potentiation (potentisation) is nothing more or less than a physical process at which the dynamic energy, latent in crude substances, is liberated, developed and modified for use as medicines" (Close, 1979, p 219).

Hahnemann by arguing that removal of symptoms itself meant cure from the disease and by treating the question of health, disease, and power of medicine to cure at a dynamic plane, elevates them to a plane where the contradiction inherent in other systems of treatment does not operate. This in itself is a great advance in science and the applied science of medicine.

Homoeopathy and Its Detractors

Homoeopaths and homoeopathic treatment are more widespread than is normally estimated. England is an important centre for homoeopathic teaching and practice and homoeopathic doctors are part of the National Health Service. According to an official estimate in 1972, there were more than 72,000 registered homoeopaths in India. Other commonwealth countries like Australia, New Zealand and Canada have quite a significant number of homoeopaths. It is also taught and practised in the USA, France, Germany, Switzerland and Holland. This in itself should be sufficient to silence those who ridicule the homoeopathic system of treatment by saying that there is no medicinal substance in the drugs.

They can convince themselves by the reasoning advanced by Bernard and Stephenson. In an article written in 1967 they proposed that through the process of dilution and succession, the active substance acts as a template, communicating a field to the solvent through the formation of polymer chains (gaint molecular aggregates) in the solvent. The three dimensional structure of such polymers would be specific to each individual solute. Once the structural informational content of the solute has been transmitted to the solvent through the formation of the polymer chains, the solute need no longer be present for the solvent to communicate that information to the human organism (Bernard and Stephenson, 1967, pp 277-86).

Mathew Hubbard pointed out in an article in 1977 that when Avagadro formulated his law, matter was not believed to be visible beyond the level of the atom. Now, of course, we have identified subatomic particles, and one contemporary model defines atoms as ordered waves of energy. Thus when we study the phenomena associated with apparently material substances, we are no longer restricted to the realm of matter; matter and energy are interchangeable and are constantly being transformed from one form to the other (according to the first law of thermodynamics, as electrons jump from one orbit to another around the nucleus of the atom, radiation is released, which can be measured on a spectroscope). Each chemical element has its own spectroscopic "fingerprint", which is produced by this characteristic pattern of radiation. He proposed that the energy released from such molecules of matter must permeate an entire solution; thus, even if there is not a single atom of the original substance present in a highly diluted solution, the energy associated with this subatomic activity should be present in the solvent (Hubbard, 1977, pp 433-36).

The above two tentative approaches to the explanation of the activity of high potencies have some implications that can be tested in the laboratory. In a series experiments in the 1950s, A Gay and J Boiron demonstrated measurable differences between the capacitances (dielectric constants) of distilled water and of sodium chloride dissolved in distilled water and carried through stages of dilution upto 10^{-605}. Also, in 1931, Paterson and Boyd showed that the Schick test, conventionally used to determine the presence or absence of immunity to diphtheria, can be altered through the administration of high potencies of either alum precipitated toxoid—used by the allopaths in material doses to induce immunity—or of Diphtherinum, a nosode prepared from a diphtheritic membrane. There are many more studies of experiments to prove the effect of high potency drugs. Weiner and Goss cite a few examples in their book (Weiner and Goss, 1982, pp 129-30).

Another group of detractors allege that since homoeopathy is solely concerned with symptoms, it ignores even such cause(s) of the disease that modern science so powerfully establishes, like bacteria. Some go further and argue that even after the symptoms are removed as a result of homoeopathic treatment, the cause remains and therefore the symptoms again reappear. Yet another criticisms is that since it treats individual patients and prescribes different drugs to different persons suffering from similar symptoms, it is not suitable in epidemic conditions. A surprising thing about such criticism is that they are levelled not by uninformed persons but by highly informed ones, by 'experts'.

Such criticisms spring from a profound ignorance of Hahnemann's teachings and subsequent developments in other fields of knowledge and science. In section 31 of *Organon*, Hahnemann says: "The inimical forces, partly psychial, partly physical to which our terrestrial existence is exposed, which are termed morbific noxious agents, do not possess the power of morbidly deranging the health of man unconditionally, but we are made ill by them only when our organism is sufficiently deposed and susceptible to the attack of the morbific cause. . ."

We thus see that Hahnemann not only identifies "morbific noxious agents" but also explains the reason because of which not every one succumbs to bacteria though all may be equally exposed to them. It would be interesting to note that he recognised the presence of bacteria and attributed to these animal forms, too minute for the eyes to see, many forms of epidemic and acute illnesses. He announced his deductions in 1818, more than 60 years before Koch isolated the tubercle bacillus (Roberts, 1979, pp 180-81).

Stuart Close says:

> The real cause (of the disease) is the whole of these antecedents, and we have no right, philosophically speaking, to give the name of the cause to one of them, exclusively of the others.

Also,

> Brilliant and successful as have been the attainments of bacteriologists in creating a new science of sanitary engineering, they have failed and must continue to fail, to establish bacteriology as the basis of a therapeutics.

Further,

> In cholera, for example, admitting the existence and presence of the bacilli as one causative factor, we still have to reckon with sanitary, atmospheric and telluric conditions; with economic and

social conditions and habits of life, with means and modes of transportation and intercommunication between individuals and communities; with individual physical, mental and emotional states, etc., all of which are essential factors, in some combination, in determining and modifying the susceptibility of individuals to the bacilli; for without some combination of these factors, the bacilli is impotent and the disease would never occur (Close, 1979, pp 268-69).

We thus see that homoeopathy is closer to the modern concept of health care and preventive medicine than other systems of treatment including allopathy.

Homoeopathic treatment has been successful in epidemics even during the lifetime of Hahnemann. Weiner and Goss give a detailed report of a survey conducted in England to determine the effectiveness of a homoeopathic nosode, Influenzinum. This holds good for the diseases caused by the virus also. Weiner and Goss add a speculative note:

> There is a widespread concern about the dangers of the research in bacteriological warfare; scientists and the lay people alike portray the possible disastrous consequences of the escape of virulent organisms that have been specifically bred to resist chemotherapy. Mysterious illnesses, such as 'legionnaire's disease' have also aroused public interest. The allopathic response to legionnaire's disease was to search for an etiologic agent in order to determine the proper medicine to eradicate the hypothesised 'bacteria' responsible. In theory, homoeopathic treatment could yield impressive result in such instances for two reasons: (1) both situations have the characteristics of epidemics, hence a single remedy or a group of remedies could be determined for each particular epidemic as the proper treatment in the majority of cases; and (2) since homoeopathy selects the remedy on the basis of symptom alone, identification of the organism involved would not be necessary, nor it would be necessary to develop a chemotherapeutic agent that had the specific effect of eradicating that organism.

Underlying the specific precepts of homoeopathy there is a vitalistic principle that is clearly spelt out in *Organon* (sections 9 to 14). Section 15 visualises the "affection of the morbidly deranged spirit-like dynamis (vital force)" and "the totality of the outwardly cognizable symptoms produced by it in the organism and representing the existing malady, constitute a whole." This vitalistic principle at the heart of the homoeopathic doctrine and dialectical method of its application distinguishes it from allopathy and other systems of treatment.

Hahnemann believed that diseases entered the body in the form of miasms— subtle, imperceptible substances as "imperceptible as the vital force itself". He divided all diseases into two broad categories: (1) Acute disease or actue miasm: These are rapid in development and have a definite course consisting of three phases: (a) a prodromal period of onset; (b) a period of progress and (c) a period of decline. The vital force is generally able of curing itself in such cases provided the attack on the organism is not so violent as to cause death. (2) Chronic diseases or chronic miasm: There is again a prodromal period and a period of progress of the disease but there is no period of decline. The vital force is not able of curing itself. Under certain circumstances the chronic disease may quieten down and may become virtually devoid of symptoms, but each time it is aroused by adverse conditions and becomes worse than it was during the previous exacerbation.

Chronic miasms are further classified into three categories: psora, syphillis and sycosis to facilitate better choice of remedies.

What would tomorrow's system of treatment and health care be like? It can never allow humans to suffer for the profit of doctors or drug manufacturers; nor it can allow us to live passively unmindful of the questions that shape our existence and unstirred by the need to better our social life. It will have to identify the social, economic and political aspects of the whole termed as health problem; propose concrete ways of solving them and mobilise people to solve these problems. Hence those who are oppressed in such a system of treatment and health care will have to struggle for developing tomorrow's system of treatment and health care. And in this struggle, homoeopathy can became a tool, as it frees us from our dependence on those who are the targets of this struggle.

But before homoeopathy becomes a tool in this great struggle, it must rid itself of all that is unscientific in it, and must not shy away doing so. The most important among them is its secretarianism that the believers and practitioners of homoeopathy so strongly display. One of the reasons for its secretarianism is due to attacks on it and its inability to meet these attacks on the grounds of science. This has been so right from the days of Hahnemann. So vicious has been this attack that even a man of his nature had to limit himself to: "The physician's high and only mission is to restore the sick to health, to cure, as it is termed" (Hahnemann, 1977, p 92). He also added a footnote to it saying, "his mission is not, however, to construct so called systems by interweaving empty speculations and hypotheses concerning the internal essential nature of the vital processes and the mode in which diseases originate in the invisible interior of the organism (whereon so many physicians have hitherto ambitiously wasted their talents and their time)..." But now the times have changed, homoeopathy can meet this attack fully. Besides, history has put a different task before society, especially in poor and exploited countries. If more and more persons are embracing homoeopathy and are even struggling for its transformation, then it only underlines the historical task. And given the social need and the historical task, necessary forces will come forward to help in this great transformation.

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Exploding Myths

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When the Search Began by Ulhas Jajoo, M G Institute of Medical Sciences, Sevagram, Wardha 442 102; November 1984, pp 50, Rs 5.

MANY health projects especially in the non-government or so-called 'voluntary' sector tend to report exaggerated success stories about what they have achieved, when in reality, things are quite different. Such reports or claims create myths about what health projects can and have achieved. There are a very few exceptions to this myth-making. "When the Search Began" is one such notable exception. It is an unusually frank and critical reporting of the healthwork done in the villages near Wardha by Dr Ulhas Jajoo, his collegues and students from the Mahatma Gandhi Institute of Medical Science, Sevgram, near Wardha, Maharashtra. Instead of continuing the usual arm-chair discussions, this group went into the field, analysed their experiences in a critical and open-minded fashion. They found that many of their initial assumptions, widely prevalent ideas related to healthwork, were wrong. The "search" has been for a socially, economically, politically appropriate strategy for rational healthwork. This story of their search is very useful to any newcomer who honestly wants to do any worthwhile work. It is, however, questionable whether the structure of delivery of healthservices they have formed is radically different from the usual prescriptions (with their blindspots). Secondly healthwork has been equated in effect with delivery of healthservices, with no mention of socio-political aspects of healthwork. Let us understand their work, and their perspective as given in this short report.

Novel Health Insurance

The group decided to go into field-work and describes how, during the rains, their first visit to Punjai, a way-off village, turned out to be so difficult. It frankly admits that they chose a nearer village—Nagapur, because they realised after the first visit to Pujai, that regular work there would be too difficult. In Nagapur, they started with a weekly clinic and a drug-bank with contribution of Rs 4 per family. The drug-bank soon went bankrupt and they realised that this contribution was too meagre to run a drug bank. The initial enthusiasm of the villagers soon waned. The group came to the conclusion that because people were so engrossed in their attempts to somehow get two meals a day, health was not at all a priority, that health-education, immunisation, etc, did not elicit much response since it was not their felt-need. When they touched the villagers' felt-need (e g, getting bank loans) the response was quite different. The report however, does not elaborate how and to what extent the group continued this economic activity. It shifts to a new idea—of collecting grain at the time of harvesting, in proportion to land-holdings. This grain is to act as a kind of collective insurance for free treatment for all acute illnesses for all members of the scheme and also free treatment for acute and emergency cases at Wardha in the Sevagram medical college hospital. The medical college thus supported, subsidised this new insurance scheme in a substantial way. The grain collections had its own problems. The people with larger holding had to contribute more without getting any privileges. They were, therefore, not enthusiastic and half of them dropped out of the scheme after the first year. The drop-out rate was less among other groups. Among landless labourers, the participation increased over years. It is not clear from their account as to why the response to this scheme was better than to the earlier one. No economic or political activity has been reported. Perhaps the support of the medical college including the doctor's monthly visit made the difference.

Honest Reporting

Over a period, the group's activity acquired a certain structure and some credibility. In the course of the work they encountered many dilemmas, learnt some lessons and these have been honestly reported. For example only acute cases could be provided free or subsidised treatment, whereas people expected free treatment for all types of illness once they gave their contribution at harvest time. If a fee is charged for service the poorest, who are the ones most in need, would not get these services. The contributions from villagers could pay only for the payment of the VHWs and their drug-kits, the ANM and the diesel for the vehicle used to transport them to and from Wardha. The author correctly points out that it is a myth to believe that such healthwork can financially become self-sufficient. But the group has insisted right from the beginning that some contribution must come from the villagers. About 35 per cent of the collection from the villagers was kept aside for the payment of VHWs. This was to ensure that VHWs are responsible to the community and not acting merely as an agents of the health-authorities.

The bewildering experiences about their health-educational efforts has been sincerely reported. For example, textbooks had taught them the importance of latrines in controlling diseases. But the villagers had their own problems and hence did not accept the idea of building latrines. They did not have extra money to build even a cheap latrine for each household. Community latrines would be nobody's baby and hence would be left uncared for. The use of sanitary latrines meant fetching additional quantities of water, which was extra burden, mainly borne by the women. The villagers had their own logic for using the road-side (of the approach road to the village) for open-air defacation. It was, they pointed out, the cleanest place during the rains, and was much safer at night due to the street lights! About the small family-norm, the medical team had no counter-argument to the villager's argument that they need two sons so that at least one of them would survive to support them in old age. The medical team realised that unless infant mortality is brought down, old-age security provided, family planning propaganda would not take roots. It is worthwhile to quote their forthright conclusions drawn from their initial experience

(1) Our medical education in the hospital is inadeqate to equip us with the skills required in the rural setting. (2) Socio-economic factors (poverty) and political frame-work of the existing society are major obstacles in the development of appropriate medical care, a field about which we are kept ignorant during our medical education. (3) Medical problems are not the priority need of the people. (4) The awkward-looking behaviour of most of the people is the natural reaction in their environment. Inability to understand their environment is chiefly responsible for the big communication gap between them and we, the educated. (5) In a poor socio-economic setting, idea of self-reliance in health care activities is a myth. The poor community has to depend on someone from outside, may be a voluntary agency or the state. (6) Community participation in health care is more preached than practised. Those who claim it, either do not understand what community participation means or are telling a blatant lie mostly for collecting funds on which they so heavily depend. Collecting people to dole out a gift, which they have never dreamt of, cannot be called community participation (pp 8-9).

Cost Analysis

Their medical insurance scheme however, was a kind of a success. The data that has been quoted (p 14) about two out of the twelve villages in which the work spread, shows that "percentage of coverage for health-insurance" increased from 46.5 per cent in the first year to 71.5 per cent in the 3rd year. (This however does not tally with the earlier claim of collecting contribution from 90 per cent of the villagers in the first year (p 7)). The corresponding figures for labourers and marginal farmers went up from 36 per cent to 78 per cent. In the section "Evaluation and Cost-analysis" they have arrived at a figure of Rs 2 per head per year as the cost of the healthservices (excluding the cost of hospital admission) provided by them. The government of India's per capita public health expenditure of Rs 28 (1981-82) has been quoted to provide a camparison and it has been claimed that "much improved health-services, which have the benefit of involving villagers as contributory participants, can be provided within existing resources, if a new medical strategy is planned and implemented" (p 15). One cannot justifiably draw any such conclusions whatsoever from the cost-analysis of their work. One has to compare the health-facilities provided and the costs incurred and find out whether the costs are less or more. Such a cost-analysis of their work and of the government's work and then comparing them would tell us as to the extent to which the government's work is costly. No such analysis has even been attempted and hence no such conslusions can be drawn from their cost-analysis.

Conventional Barrier

Are there any positive achievements of this work apart from the lessons that the medical team learnt? A collective health insurance scheme (with all its limitations) in rural area, running for five years with increasing participation by the poorer sections of the community is definitely an achievement. Anybody conversant with the field would realise how difficult it is to achieve what appears on paper as small objectives. One may point out that the support from the Kasturba Hospital was quite crucial in the evolution and viability of this scheme.

The achievements in the healthfield are however, quite limited. Using "cluster approach" (collecting, immunising all the eligible children in a cluster, in one day) 95 per cent of eligible children in a few "villages around Sevagram" were immunised. This is a notable achievement. This "cluster approach" is demanding in terms of mobilisation of the people and very few healthprojects have adopted it. Using the same approach, for polio vaccination, in six visits, 81 per cent of the children received three doses and 55 per cent received five doses—this also is by no means a small achievement. Rational selection and use of drugs, preparation of cheaper formulations like a cough-mixture and a few ointments have been reported. But for the rest, a familiar picture emerges—Village Health Workers working for a paltry "honorarium" of fifty rupees per month, a full-time trained Assistant Nurse Midwife supported by a hospital facility nearby. There are many problems in this approach; some of which have been mentioned by this report. The ability of the VHW to diagnose and treat is very limited; much more limited is the likelihood of people having sufficient faith in them about these functions. A monthly visit by doctors is too insufficient; emergencies cannot be dealt with at all; health-education is never taken seriously unless imaginative and special efforts are attempted. A paltry drug kit of a very limited amount (a mere Rs 30 in this case) with the VHW is too inadequate to meet even a fraction of the drug-needs for minor illnesses; unecessary domination of doctors is hardly challenged.

To assess the "morbidity load" (amount and type of illnesses) in the community, and to determine on the basis, the type of health-activities to be conducted, the type and amount of human-power and drugs required, (and not any arbitrary amount) to organise these services through a democratically working team, etc, etc are tasks which have not been satisfactorily resolved. The content and form of health-education which is appropriate and which really makes sense is also something which needs a lot more work . . . there are so many problems and blindspots. This report does not even attempt to throw any light on any of these. Their work has created a learning process. This itself is an important achievement and hence one hopes that this work would not become stagnant, with whatever has been achieved so far, but would take up some of the challenging aspects in the field of delivery of health-care to the people. With all their efforts, the search has only begun and there is a long way to go.

The challenge in healthwork is not only of organising a cost effective, appropriate, rational, democratic mode of health-intervention from the point of view of community medicine. It is at least equally important to expose in practice the socio-political dimension of the established medical practice, to conscientise people about the exploitative, oppressive, mystifying misuse of medical science and to forge an alternative in practice. Such health-conscientisation has to be a part of broader socio-political work. People may not be interested in vaccines to begin with, or in unrealistic health advice. But they do get interested in knowing how the existing medical system exploits them and how to get out of its clutches. If aspects of non-exploitative, liberating healthwork are forged, in practice, such healthwork can contribute a lot. Most health projects have no such perspective of health conscientisation; they are aimed solely at delivering health services. This does not challenge the existing system in a direct manner; Similarly most health projects have no link, have no perspective of forging a link with broader socio-political work.

It is not clear from "When the Search . ." as to how this

work is different from other so-called successful projects in this respect. Most health projects unless they are willing to take large funds from donor agencies, or be supported by big institutions, cannot do any worthwhile work in the field of delivery of health services. (Chattisgarh Mines Shramik Sangh's health work in Rajhara is an exception which hopefully, would duplicate elsewhere.) Health education/conscientisation as a part of broader political work is a low-cost but challenging and important work which has so far not been attempted. This is in contrast to the numerous funded projects in the field of delivery of health care. It must be pointed out that the report under review does not cross this conventional barrier.

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A Bird's Eye View of Psychology

Psychology In A Third World Country–The Indian Experience by Durganand Sinha, 1986, Sage Publications.

THE term 'psychology' is a concept borrowed from the West. Thus initial studies were naturally based on Western concepts. This of course does not mean that psychology has not evolved any roots of its own in India. But it is undeniable that Western psychologists and ideas have permeated every aspect of our life and behaviour. Sinha repeatedly brings out this truism in this book covering the psychology scene in India. The purpose of this monograph, done at the instance of UNESCO, was broadly to examine the impact and role of psychology in a Third World country like India.

It is but natural that psychologists in India are very much influenced by the West in the kind of reserach work done. The offspring is bound to imitate its parent till such time that it can form its own ideas and opinions and finally enter its own creative phase. Psychology today in India could be said to have arrived. We are not only able to evolve our own theories and concepts but are also in a position to influence the world at large.

Sinha traces the growth of 'psychology' in India in four phases pre-Independence, post-Independence phase of expansion, phase of problem-oriented research and finally the phase of indigenisation. This can be looked at another way in developmental terms. The infant stage of being shackled to the West; the childhood period where aping went on; the adolescent phase when Indian psychologists tried to break away from the bonds of the West, attempted to coin their own terms and asked questions of their parents and their motives, changed and adapted values and attitudes to suit their environment; and the adult phase where indigenous research is being done and a certain amount of influence being wielded on others, especially in the Third World countries.

The author seems to have taken an unduly critical attitude particularly in his reivew of the post-Independence period—like a harsh parent! Fortunately, as the review proceeds a more objective account is seen.

The bulk of the presentation is in terms of enumerating the research work done in India covering different areas and branches of psychology. But in the area of testing, there do seem to be some gaps. Several tests have been adapted and are apt to our conditions do not figure, e g, Bhatia's tests and child development tests.

Psychology has made quantum jumps in the 60s and 70s but what has not been done is to dispel the wrong notion that psychology means something to do with abnormal people—being the layman's understanding. All the reserach done is commendable, but what has this resulted in terms of follow-up actions and policies? The author himself puts the impact of psychology in these words, "Psychology in India has made significant contributions to the individual and unlimited spheres of our life like in industry, educational and clinical fields because they share many characterstics of similar institutions in western societies where this discipline has developed. But on a macro level and on larger social issues such poverty, inequality, social justice and social change, psychology has yet to make a significant impact." The author's message to practising psychologists and scholars to be 'indigenous' and 'Indian' in their pursuits is very apt for psychology to enlarge its role in our national life.

The book would have added to its stature if the author, with his vast knowledge and experience, had given more emphasis to the future trends and directions that Indian psychology should take—to make it more meaningful and relevant to our society and solving its problems.

The overall merit of the book lies in its broad canvas giving a bird's eye-view of the psychology scene in India. It could be a good reference source for scholars and educationists alike to be aware of what is happening around the country. Its bibliography is in itself a mine of valuable information. Altogether, the book is a commendable effort.

Purnima Rao

(Continued from p 2)

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Contradictions Where There Are None

Thomas George

ANANT PHADKE's article "Organising Doctors: Towards What End?" is full of ambiguities and sweeping generalisations. At the very outset Phadke says that doctors belong to a social layer called "the new middle class—a peculiar product of developed capitalist society". One can question the understanding that Indian society is a developed capitalist society; he has given no indication as to how he arrived at this concept. To mechanically transfer concepts developed for Western societies is neither scientific nor helpful.

Phadke has gone on to enumerate four contradictions that doctors in government services face due to what he sees as their 'contradictory class location' betwen the capitalist class and the working class. The first of these is that they are wage earners as well as officers. He feels that since they are officers they will stand apart from their subordinates in wage struggles. It is difficult to understand how this constitutes a contradiction. Is Phadke implying that doctors will seek to crush the wage-demands of the subordinate staff? If so, this is an unreasonable understanding. Wage demands of subordinate staff in no way hurt the doctors, even if they belong to Phadke's "new middle class", since it is not they who pay the wages. So the mere fact that at this stage of social evolution in India the doctors may not *actively* support the wage struggles of their subordinate staff in no way constitutes a contradiction.

The second contradiction that Phadke sees is the one between the need of the government-employed doctor to amass wealth and his limitations as a wage-earner expected to follow the ethics of a noble profession. Here again Phadke seems to have fallen into a widespread misconception. Just because doctors have a relatively secure economic position, one cannot call it wealth. It is true that the government forces doctors to do private practice by deliberately paying low wages. It is also true that very often this private practice is unscientific. But this constitutes a point on which to organise doctors. Most doctors would like to do scientific practice. They would also like to earn a good living. If it can be demonstrated to them that these two things are not fundamentally incompatible, but only appear to be so because of the existing organisation of society, surely they would work to change this organisation. We must understand that the present rulers of India will only provide a level of health care sufficient to keep the people quiet. The quality of health care is not determined by the doctor, it is determined by the government. The government is not interested in spending the amount necessary to provide adequate scientific health care. It will spend only enough to prevent uncontrollable unrest and no more. It will pay the doctors as little as it can thereby forcing them to supplement their income by private practice. The fundamental conflict therefore is not between doctors and the people but between the doctors and the government.

According to Phadke the third contradiction is between the "technocratic scienticism" of doctors (that is, their way of looking at health and disease as primarily a question of interplay of germs and chemicals amenable to drug therapy) and the real need for community medicine. I think that this is vanity pure and simple. Many activists feel that they have discovered the Keys of the Kingdom, the root cause of India's poor health status, and that this is the lack of a "community approach" by doctors. The fact is that every doctor is well aware of the social aspects of disease though he may not have a clear analysis of the Indian social structure, or what to do about it. But is the solution to this problem the "community orientation" of doctors? The government certainly thinks so and the doctors' "lack of community orientation" is favourite excuse for poor health services! But neither the government nor Phadke has cared to explain how doctors are to put into practice this fabled "community orientation" in the *existing* scheme of organisation of society and health care.

Phadke's fourth contradiction escapes me entirely. I don't understand how the fact that "medicine transcends narrow barriers and exposes medicos to universal concepts" and the fact that (according to Phadke) the majority of doctors are from an upper-caste urban background, constitutes a contradiction.

The sad part is that Phadke's analysis leads him to a fundamentally elitist position. He wants to organise only "a small section" for a comprehensive revolutionary change in the medical system because he feels that only a small section will respond to his analysis. History tells us that revolutions are not brought about by small sections of society. So when an analysis leads one to such conclusions, it is a clear indication that one should analyse again and look for and correct the errors in understanding. Only such a scientific process can clarify the debate.

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THE EARTH IS A SATELLITE OF THE MOON

The apollo 2 cost more than the apollo 1
the apollo 1 cost enough.

The apollo 3 cost more than the apollo 2
the apollo 2 cost more than the apollo 1
the apollo 1 cost enough.

The apollo 4 cost more than the apollo 3
the apollo 3 cost more than the apollo 2
the apollo 2 cost more than the apollo 1
the apollo 1 cost enough.

The apollo 8 cost a whole lot but you didn't feel it
because the astronauts were protestants
they read the bible from the moon,
bringing glad tidings to all christians
and Pope Paul VI blessed them when they returned.

The apollo 9 cost more than all the rest together
including the apollo 1 which cost enough.

The great-grandparents of the people of Acahualinca
were less hungry than the grandparents.
The great-grandparents died of hunger.

The grandparents of the people of Acahualinca were
less hungry than the parents.
The grandparents died of hunger.

The parents of the people of Acahualinca were less
hungry than the people who live there now.
The parents died of hunger.

The people of Acahualinca are less hungry than
their children
The children of the people of Acahualinca are
born dead from hunger,
and they're hungry at birth, to die of hunger.

The people of Acahualinca die of hunger.
Blessed be the poor, for they shall inherit the moon.

LEONEL RUGAMA
(NICARAGUA)

Leonel Rugama was a member of the Sandino National Liberation Front. He and another comrade were trapped in a house in the city of Managua in January, 1970. The house was surrounded by troops and war materiel. The two men put up a courageous fight which lasted several hours. When their ammunition ran out, the army finished them off. Rugama was 20 years old.

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The views expressed in the signed articles do not necessarily reflect the views of the editors.

Politics of Primary Health Care

SINCE the seventies, in many national and international circuits of health bureaucracies, Primary Health Care (PHC) has become a panacea for all the evils of the poorer nations. The WHO has projected it with all its convictions and the member nations have accepted. it with equal vigour. According to the Alma Ata declaration:

> Primary Health Care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system of which it is the central function and main focus, and of the overall social and economic development of the community.

Today when this strategy has been accepted by such a large number of countries, there is a need to examine its potential strengths and weaknesses.

The idea that health is closely related to people's living and working conditions and that it is an outcome of their socio-economic environment was vocalised by men in different fields like John Snow, Engels and later Virchow in the West. It manifested itself in the sanitary movement of the 19th century. In India and other parts of the East it had much deeper roots, visible in the method of ancient medical science itself and in the cultures of Harappa and Mohenjodaro. In India during the struggle for Independence, a demand for comprehensive health care was a part of the national movement. Why then this sudden fervour now for projecting PHC as a new concept by international and national official circles?

To understand the politics of PHC one has to understand the role that UN and WHO have played in the overall politics of the world. Always supporting the interests of the imperialist nations, these organisations have used the liberal tools of aid, support and providing consultancy to diffuse, control and direct crisis situations. The effort to develop an alternative World Economic Order in the 70s was one such spurious exercise and as a part of it, was proposed the notion of alternative health care for the third world.

The motives behind it were to check impending destructive and costly reactions from and within third world nations whose poverty, disease and squalor were becoming threats to stability. PHC was the baby of the liberals in the imperialist camp and WHO projected it as the solution to poor nations' health problems—with full promise of help and support, but a clear understanding that the local political structures alone will give shape to the implementation of Primary Health Care! Such an international strategy which offers free help without any political price is obviously seeking change in health situation with or without the political will of the local government. It is interesting that the international terms of trade are in total contradiction to this attitude. Even though one knows that some liberals have their hearts in the right places, this conflict in international strategy needs serious analysis to understand the reasons for this special concession to health.

At the national level the concept of PHC acquires multiple dimensions. Given the particular hue of the government, the implications have varied from Africa to south east Asia and Eastern Mediterranean regions. The issue is what use does a national government make of the concept? Does it use it as the concept is presented by the Alma Ata declaration and make it a part of its effort to develop an integrated strategy for the betterment of its people, as in Angola, Tanzania and Mozambique or does it allow the concept to degenerate into a slogan behind which the same old strategies with some new features continue to be implemented—at a faster rate perhaps with the additional inputs from the international fund givers—as in India and Pakistan?

A grasp on the national politics of PHC requires an understanding of the country's socio-economic and political structure and the nature of its government and health service structures. Only such an understanding allows one to assess the potentialities or limitations of the system to achieve PHC. An example of the interplay between PHC and politics is the level at which it is integrated into the planning process of a country. Thus, the Chinese and Vietnamese incorporated PHC in the very process of national planning right from the period of their independence without giving it a name. In contrast, India made so much fuss and then relegated PHC to the care of the health ministry while the overall planning processes took its own directions. Yet another example is the implementation and outcome of programmes introduced under the banner of PHC. These programmes which may have a potential of providing much needed services are overtaken by the local power elite through their links with the health and administrative bureaucracies. The nature of the latter thus becomes the primary determinant of the outcome. The Community Health Guides scheme and the drinking water supply through borehole hand pumps in India are two such examples.

Another dimension of the PHC efforts at the national level is the setting of priorities and the selection of technology. In India despite the official acceptance of implementing PHC by 2000 AD, the heavy emphasis on urban-based services and curative approach in rural areas continues with heavy dependence on expensive equipment and drugs. The drug policy needed to provide PHC is yet to be formulated. Can issues of priorities and technology be then isolated from politics? A simple but revealing example is the supply of "electrolyte" packets in the Community Health Guides' kits! Does it not show links between the health administrators and the drug industry who know that addition of so many salts to the basic mixture only increases cost and not effectivity?

If the concept of PHC is getting distorted in the hands of the not-so-democratic government and is becoming a tool for creating two types of services, one for the rich and the other for the poor, should it be criticised, rejected, accepted as an unavoidable distortion or used to broaden the base of democratic movements? These are some of the questions which need to be answered by those who are working in the

interest of people's health. Can PHC as a concept become an inspiration for those involved in people's struggle for their rights? If PHC is an outcome of total development then it should be. And what have people's democratic and left movements done about it?

There are many small or regional projects experimenting with implementation of primary health care. What is the role of such projects in focussing upon the issue of PHC or in diluting it?

In academic circles, in the name of professionalism and the need to achieve results, a concept of "selective PHC" has been circulated which means let us not talk of comprehensive development but do what we can without disturbing the existing balances. This is attractive to those who would like to go back to singing praises to powers of technology and managerial competence. There is need to examine such concepts threadbare to show their reactionary ideology as well as non-feasibility.

Are there any lessons that we can draw from the experiences of the socialist countries which have tried to provide health care not in isolation, but as a part of their total developmental processes? These are the major questions which need to be addressed when one is dealing with the bipronged weapon of Primary Health Care.

This issue examines some of the problems raised in the editorial. Guy Poitevin describes his experiences in taking up health issues as a part of larger movement for socio-economic change. Manisha Gupte comments on the ideology and perspective of the maternal and child health programme and points out that without a questioning of the role of the women in society, any such programme would be ineffective. Asha Vohuman reports on the mass immunisation programme which was launched with such fanfare in Bombay in 1983, not so much because of its potential impact on the health of the children but because the minister in charge needed a visibly successful campaign to consolidate her political gains. The reprinted article from *International Journal of Health Services* provides a historical background of the concept of public health and raises some questions about holistic health alternatives emerging in the US. And in the non-theme section we have Jytte Willadsen discussing the question of the sexist bias in medicine. As a doctor herself she also touches upon the problems encountered in bringing about any changes in the very male oriented medical establishment in Denmark.

We have as usual the Update and Dialogue sections. Sujit Das continues the discussion on the role of doctors; Ulhas Jajoo responds to Anant Phadke's review of his book *When the Search Began (RJH, I: 1)* and *AS* questions if drug therapy in psychiatric problems does not have a place in the present socio-political context.

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XIII Annual Meet of MFC

Medico Friend Circle will hold its XIII Annual Meet at Seva Mandir Training Centre, Kaya (near Udaipur), Rajasthan, on 26th and 27th of January 1987.

The theme chosen for discussion this time is *"Family Planning in India: Theoretical Assumptions, Implementation and Alternatives".* Family Planning has generally been considered an important part of Primary Health Care, but over the past two decades, it has come to occupy a key place amongst the country's development strategies. Is its elevation to the level of a panacea, for the problems facing the people, based on well examined theoretical assumptions? What effects has the policy of incentives and coercion had on the performance of other health programmes? Out of the existing contraceptive methods which is the least harmful? Do some of these methods need to be rejected outright? Are there safer alternatives? These are some of the issues to be discussed at the Meet.

As usual there will be no reading of papers. Background papers on related topics will be circulated beforehand to facilitate discussions. They include: (a) Problem of population versus resources (b) Theoretical assumption of FP policy in China (c) Critical examination of the FP policy in the context of the child survival hypothesis (d) Comparative analysis of the dangers of pregnancy and contraception (e) Women as the main targets of FP policy (f) The paradox of higher FP performance in tribal areas (g) Incentives and coercions—effects on Primary Health Care (h) Pattern of resource allocation in our Five Year Plans (i) Evaluation of the existing FP methods (j) Natural Family Planning methods as safer alternatives.

We invite you to attend the Meet and share your views and experiences. We also invite you to write background papers on any other topic to the theme. Your note/paper should reach the Convenor's office by the **31st November.**

Participants are as usual expected to pay for their own travel. Simple boarding and lodging facilities will be available at the venue, on a payment of Rs. 20/- per day per person. We charge a small registration fee to cover the cost of the cyclostyled background papers. Return reservation facilities are also available. If you wish to attend, please write to: **Dhruv Mankad, Convenor, Medico Friend Circle, 1877, Joshi Galli, Nipani-591 237.** We will then send you the venue details and background papers.

Social Dialectics of Primary Health

guy poitevin

This article presents some socio-psychological observations and conclusions drawn from a social study made of a limited voluntary health programme undertaken by a small NGO in remote rural areas of Maharashtra (Sahyadri Range). This qualitative study is concerned with health as a social process. Health practices are examined as components of over-all socio-cultural dynamics and the foundations of a people's health movement sought within the context of a wider attempt of socio-political awakening and people's organisation.

SEVERAL voices raise to draw our attention on primary health issues as components of local socio-cultural dynamics. This perception prevails, for instances, as a conclusion of the assessment of the working of the Rural Health Scheme made by the Population Research Centre of the Institute of Economic Growth: "His (Community Health Volunteer, CHV) role as a public health worker is more social than medical. It would require of him to create health consciousness within the community and to prepare and organise the community effort to carry out all the necessary steps of improving sanitation within the settlement, cleansing up the surrounding areas and imparting health education to all its members. This work within the community is in fact the fundation upon which the whole health care delivery system must rest" (Bose A, 1983: 53-80). P B Desai concludes a general evaluation of the CHV Scheme in India with the following assessment: "The most crucial shortcomings of this kind of approach is the failure to upgrade the capabilities of individuals, families and communities to take upon themselves the responsibility of attaining and maintaining conditions for healthy living within their jurisdictions. In other words, the central issue of the promotion of self-care is left unresolved" (1983: 7). He then stresses the point that the definition of the objectives drawn in the Alma Ata Declaration (1978) to resolve this central issue is 'holistic' in nature, as their formulation insists on a full community participation and a spirit of self-reliance and self-determination (WHO-UNICEF, 1978: 3), and the "task of delivering health care must begin with this non-medical, social endeavour of achieving the necessary social transformation at the grassroot level."

If such is the case, once we have acknowledged and really perceived the social role of the CHV and measured the import of the 'holistic' perspective with which we should approach primary health issues, a corollary immediately follows, that health development schemes should seek the help and the critical insights of social scientists, anthropologists and psychologists. And this is all the more necessary when we are concerned with provision of primary health education and care based on efforts of self-reliance among the most underdeveloped sections of the rural population, whether these efforts be undertaken by government agencies or NGOs. If these efforts are to be "viable, dynamic and positive instruments of social progress" (P B Desai), then primary health schemes should first of all become the subject matter of social science investigation and critical analysis.

We present here below some/socio-psychological observations and conclusions drawn from a social science study of a limited voluntary health programme undertaken by a small NGO in remote rural areas of Maharashtra. The study is not directly concerned with such objectives as the raising of health status, the planning of alternative or integrated health services among deprived rural population and the related welfare, educational or developmental issues, in a more or less static way. Health is examined here as a social process from within a marginalised population, *viz.*, as a dimension of an overall dynamics of socio-cultural and socio-political awakening and people's organisation. The study is concerned with the conditions of a possibility of an effort of health by the people which actually cares for all, based on a critical appraisal by those concerned -i e those deprived of health care facilities—of the present health system and motivated by a will to try out self-reliant ways. This case study is partial contribution towards answering some of the following questions: the need for a strategy for enlisting community participation, the task of generating social health awareness, securing of the cooperation of women more than of men, generating appropriate health practices, organising collective health actions, etc. We may even piously wish or dream that "if we succeed in organising the community for giving to itself-a primary health care system of its own choice, it may become all the more practicable to carry forward this process of self-reliant development into all fields of social and economic progress" (Desai, 1983: 8). But the crucial question remains unanswered beyond the many evaluations of the shortcomings and failures of the CHV Scheme: what does it mean methodologically to "organise the community" for enabling it to wish, to conceive, to experiment, to chalk out and to give itself a health system appropriate to its concrete needs. What does this mean in terms of strategies of social action?

Primary health care as the subject of social science research should therefore be examined and evaluated by focusing on the dialectical relation obtaining between the level of health conciousness and the forms of collective organisation on health issues on the one hand, and on the other, the local socio-cultural, administrative and power structures, including those of the public health care system itself. If health status is rightly considered as an index of social development, health consciousness—as expressed in relevant renewed perceptions and representations and consequent forms of collective action—should be rightly considered as a component and an index of the socio-cultural and politcal awakening of a given population.

The health education and care programme carried out by the voluntary organisation Village Community Development Association (VCDA) in the remote hilly areas of the talukas of Mulshi and Velhe (Sahyadri Range) was considered as providing an adequate field of observation for such a scientific investigation by the Centre for Co-operative Research in Social Sciences, Pune which conducted the study with a grant from the ICSSR. The health programme under study is part

of a wider educational programme (called "School without Walls" and comprising mainly non-conventional programmes of cultural action for children and women directed towards children's and women's organised collective action) which is itself a part of a much wider programme of "conscientisation" and organisation of the deprived sections of the population of several rural talukas around Pune. The health programme is carried out in areas deprived of any medical services. Quite recently, the government made an effort to implement its CHV Scheme. A few private practitioners sometimes visit the area to give injections and to make money from the population. Medical officers of the PHC (Velhe and Paud) do rarely visit the area, except for enlisting "cases" (tubectomy operations). Sanitary conditions are particularly bad. Animals are kept inside the houses. Many villages are cut off by the monsoon rains. In the dry season, very few villages are directly connected by a bus to the taluka centres. The scarcity of land does not permit a sufficient and balanced diet. Traditional representations about diseases and their treatment are generally prevalent.

The main aim of the study was, to document a few possible ways of reciprocal determination, among marginalised rural population deprived of elementary health services, of three series of processes:

(1) The spread of medical knowledge and the consequent improvement of health conditions among marginalised rural population;

(2) The process of socio-cultural and socio-political awakening especially with reference to the representations about health and body and the present disfunctions of the health care system, with the consequent people's collective initiatives of organisational attempts to deal with health problems as well as other related issues;

(3) Autonomous and alternative efforts to promote attitudes and concrete attempts of collective self-help in respect of primary health education and care among the same weaker sections.

The assumption underlying and motivating the study was the conviction of the necessity of such a reciprocal determination: failing this, no health development scheme—be it of a minor scale—can significantly contribute to the radical changes needed in this field. The aim of the qualitative study was to describe and establish the nature, the extent and some forms of this mutual positive correlation.

A second aim was to draw observations and conclusions relating to and bearing upon concepts and procedures of development—and especially of health development— of processes of cultural, social and political awakening and organisation of the marginalised sections of rural population. These latter processes are obviously leading towards redefining the epistemology of development. The case study sheds some light on these theoretical issues with regard to underdeveloped rural masses the health needs of which have been consistently neglected.

Three aspects characterise the methodology: The analysis is jointly and cooperatively carried out at all stages, with those concerned and involved in the scheme, resorting to methods of collective self-analysis and research-action. Such a methodological approach is expected to promote a better critical consciousness and consequently to foster the process of autonomous self-determination as well as develop the theoretical ability of the group of health workers.

The validity of in-depth studies is not to be undermined with regard to the needs of those concerned with macro-planning and large scale policies. Macro-level planning cannot with impunity overlook the conclusions of in-depth analyses. Planning remains a futile exercise whenever it does not take into account the dynamics operating at the grass-root level.

The scheme under study not being a medical care scheme, sampling methods do not suit the objectives of the investigation. The changes occuring in health preceptions, practices and conditions are evaluated by several types of qualitative procedures. One of the most significant is the so-called "sociological intervention": The sociologist and his assistants intervene at the time of seminars and analytical exercises, in-depth interviews of individuals and groups of health workers on a specific theme; personal interviews of villagers; inquiries made by some trained health workers, personnel narratives; minutes and reports of usual meetings and free discussions among the health workers; and role-plays. No questionnaire nor schedules were used; only guide-lines were always carefully prepared for conducting discussions. The study was spread over two and a half years (1983-1986) as a sort of continued analytical effort following and accompanying the evolution of the action programme.

Awareness of Identity among Health Animators (HAs)

The most decisive step consists in generating a basically new approach through a sort of cultural labour prompting the volunteers to discover their identities as HAs in a way quite different from their own expectations obviously modelled after the social patterns and the collective representations shared by the population at large.

After two to three years of health training and practice, HAs unanimously acknowledge their complete unawareness at the beginning of what health might mean. The contrast between the perceptions acquired during many months of continuous training and involvement and the remaining memories of the initial understanding leads to an evaluation of what happened at the begining. First of all, the idea, let alone the wish, of any health activity being undertaken by the population itself, did not emerge of its own from the people concerned or involved as HAs or as beneficiaries. What then was the motivating factor prompting them to undertake health tasks? People from the lower sections volunteered to undertake a health activity on account of the moral authroity that their organisation Garib Dongari Sanghatna (GDS) had acquired and of the trust they had already put on the external social agents who floated the ideal (the main animators acting as catalysts of GDS). It is obvious that without the on-going organisational process such a prompt response, would have been impossible. Without such a collective social support with its components of moral authority and confidence, neither the idea of a health task would have been effectively welcomed by a deprived population nor any man, let alone a woman, from lower sections would have dared to volunteer.

Secondly, in the absence of an awareness of the urgency

of health issues, what representations defined and accompanied the idea of a health task? The possibility of some honorarium was a very strong constituent; the vague desire of some sort of 'employment' was also there; "to become a doctor!" was a widely shared expectation; "to distrubute medicines and pills, to give injections, or to become a dai": such was the most substantial content discretly related to health; some had really no idea of what could be the task expected from them; there was a strong apprehension, especially among illiterate women, about their ability to comprehend; some daring pushed ahead all of them and some liking too. When we compare these initial representations with those brought about after three years of experience, three main shifts appeared to occur in the preceptions. Firstly, from static notions of social status and prestige position associated with the health profession and the expectation of an employment, the approach evolved towards activist attitudes, became action-oriented and conceived in terms of actual achievement. The systemic outlook was altered into a dynamic attitude. Secondly, from self-preceptions in terms of ignorance, fear and inferiority feelings, there was a shift towards self-confidence, boldness. Their ability to assimilate knowledge enhanced the self-image. Inhibition gave way to self-assertion. Thirdly, from an individualistic outlook and wishes of private profit, there was a shift towards a social understanding.

The interest was hence motivated at the start by the hope of a small honorarium (discontinued later on), by the wish to be a 'doctor', by the desire to escape deceptive practices of the private doctors, by the pleasure of getting information "when we realised that we could understand it". The interest of those who had no specific liking for the topic was raised when they learnt something new and delivered a few pills. After two or three years, four main motivations are expressed as follows at the time of health seminars: Let us give information to the people. Let us sit together and educate people. Let us organise the people. Let us be self-reliant. Later new-comers, all women, all illiterate, who joined a scheme which they had observed, give the following reasons for taking up this responsibility: to get a new education and training; if they fall sick, to be able to do something by themselves; the good results of the medicines circulated by the HAs; no money to buy medicines from private doctors, but cheap pills available from the HAs, even on credit; doctors take a lot of money and do not treat unless paid beforehand; interest in this topic; if they now learn, their children can be taught... To the question that such interest may not be sufficiently strong when male pressure is raised against women taking the lead, the answer is that: "We have been selected by a group of people during a meeting. We have the support of people".

As a matter of fact, external support is not sufficient. The female new-comers maintain their involvement out of a strong internal conviction: "We have seen the earlier ones. They committed themselves to this work. They have not eloped or have been taken away by men! The provision of a health education scheme, to succeed or fail for many reasons absolutely alien in nature to the health issues tackled by the scheme. One of them has been suggested above concerning the social factors conditioning the desire for, the access to, the sharing and circulation of medical knowledge among rural lower sections. Secondly, a health scheme is bound in the first instance to be specifically 'recognised' or understood, from a socio-psychologically point of view, through the established patterns of representation concerning doctors, health and therapies. There may be therefore some naivety on the part of action groups to resort to health as an entry point if this means that health, *as such*, on account of its urgency, is expected to easily generate radical social insights. The prevalent unawareness about health as a personal as well as social issue and the deeply imbibed pre-critical and unconscious cognitive structures in this respect make health one of the most deceptive and difficult 'entry points' if one looks forward to it as a lever for radicalising rural populations.

In such circumstances, a main concern of a health scheme consists in defining the role of the HA. This had been and remains one of the main themes of the regular and continuous training programmes of HAs in the VCDA scheme. As a result of discussions among all those concerned by the scheme, doctor, activists and mainly HAs, the following write up was prepared as a basic chart of the HA's role, as an operational model.

Our Health Work: Why and How?

—We and our children fall sick every now and then.
—When we fall sick, we never get medicines soon, nor do we get good medicines.

1. Why do we fall sick so often?

The reasons are that:

1 We do not get enough to eat nor is the food good. Then, as a result, we become weak.

2 We do not get enough of water, nor clean and pure water. As a result in the dry season, scabies increase and in the rainy season, diarrhoeas increase.

3 Our living quarters are small and not clean. We keep our cattle inside our houses.

4 During the rainy season, we work exposed to cold winds and we have not enough clothes to put on.

5 Our work is dangerous, instruments are primitive and insufficient. As a result, accidents occur; we are overworked; we quickly tire and we do not pay attention to our health condtion.

6 Many times, we are overwhelmed by difficulties: as a consequence, our mind does not remain sane. The pressure of the male domination upon women is epecially heavy.

7 The government has no money the government people do not give us information. But it takes great care of a handful of privileged people.

8 Bad habits: alcoholism, tobacco etc.

9 Frequent pregnancies.

10 No vaccination.

If we could get rid of these difficulties, then we would not fall sick so often. But, today, these difficulties cannot be removed. As a consequence, the frequency of diseases cannot immediately come down.

2. Why do we not get proper medicines when we fall sick?

1 There are no doctors in our area; the 'medicine men' are many, they deceive us.

2 The doctors who come into our area, behave like 'medicine men'; for instance, for no reason, they put on a very serious face, use difficult words which they pronounce like mantras and create an atmosphere of mystery. Although there is no need, they give injections and prescribe useless medicines. The medical profession is being converted in to a business like any other business. It is a profession consisting of selling medicines. The more money you give, the better treatment you will receive. A doctor is no different from an agent of a drug company. Doctors behave like dealers: they store the knowledge as shopkeepers

store the commodities and make us more expensive. There is a competition for consumers, (as among dealers) to obtain more consumers and gain more money.
Where is 'humanity'?

3 *What is clear about today's doctors*?

Doctors do just sell treatments. Moreover, on account of the doctors' behaviour, some ideas are firmly embedded in our minds, for example: money is everything; the knowledge of the doctor is very complicated. We shall never be able to understand anything of it; Our health depends upon doctors; Doctors' work is intellectual and of a much higher grade than our labour in the fields.

4 *What is the use of our health work*?

We cannot bring about important changes in our condition, so exposed to diseases with our health activities. The reasons are as follows: Our health condition depends much more on many other factors of our whole environment than on medical factors; the knowledge that we can get about health as health animators is limited. The pills and medicines that we give are simple and not many.
What then is the use of our health work?

We want to bring, at this primary level, a new concrete way of undertaking health work. An example will make it clear. What is the difference in the health work, between the method that is usually followed today, and our method? This will be clearly understood from the following example.

Let us suppose that a lady health animator from our group attends a child suffering from summer diarrhoea, what will she be able to achieve?
Change in the body: We shall be able to win over the disease which affects the body of the child.
Change at the economic level: A good treatment can be given at a very small cost. We can demonstrate it.
At the level of health consciousness: The health animator can change the ideas of the people. What will she/he tell them?

1 Why diarrhoea occurs, what is the treatment, and if it can be prevented. This *techincal* knowledge about diarrhoea will be given.

2 Why diarrhoea occurs much more often among the poor and in the villages. How the proper preventive treatment of diarrhoea depends upon a proper water supply. Why today's doctors and drug companies take pleasure in treating diarrhoea with very expensive medicines. This is *social* knowledge that the health animator is giving.

3 How there is no need for a doctor to treat simple and minor ailments and what is the opposition of the private doctors to this statement.

4 How we can deliver people from the exploitation of private doctors.

5 How in our health work there is no domination of the doctor. We don't give him undue importance.

6 Why, despite so many promises and announcements on the part of the government, this latter cannot seriously undertake genuine health work of that sort.

7 This health work is going on in a nice way, because we are awakened, organised. Our health work will progress to the extent our awakening and our organisation will grow.

8 Still, as long as food, water, shelter, education, cloth, etc. are not available, we shall not stop falling sick time and again.

This definition of the HA's role tries to give a concrete design to a specific concept of health work among and by marginalised rural population. This concept ought to be made explicit. The health work in such a context is conceived as aiming 1) at forging a collective health consciousness based on a critical perception of the relation obtaining between people of lower social strata and their actual physical environment and specific social constraints; 2) at making experimental attempts which constitute *per se* a practical critique of the prevailing methods and structures of the health care system; 3) at projecting in an embryonic form a sort of miniature model revealing the feasibility conditions of alternative values, norms, organisational patterns and practices of medical care; 4) at raising the level of socio-political awareness of the whole population in this respect through health education, self-reliant practices and collective health action as levers, thus contributing, in its own way, to strengthen the overall health movement; 5) at resorting to operational concepts and criteria of evaluation of a social and cultural nature instead of giving priority to and taking only as operative norms the quantitative medical improvements in the health status of a given population, objective that at any rate the NGOs are unable to achieve—particularly the small ones—on a suficiently large scale.

Selection of HAs

A general model remains futile without its operational concepts. The selection of HAs is one of them. With rare exceptions of selection being made by the external main animators of GDS, the HAs of VCDA were regularly selected by local groups of GDS during their meetings (with the 'permission' of the husband or parents for the female HAs). A few women were selected at the start on account of their activity as teachers in a voluntary nursery school of GDS. Sometimes special meetings were called to deal with this issue and several meetings were necessary to make a selection. In the course of time, when new volunteers joined, they were all co-opted by the local groups of GDS. The selection was not a sort of casual appointment but the result of group discussion and exchanges among the assembled people.

When the health workers look back and consider the procedures of their initial selection, they come to the following conclusions.

At the beginning, without any experience of procedures of collective determination, "We had no idea of the method followed, and we did not understand its importance", confess all of them. The cooptation process from within a group for a task to be carried out in the name of a group or mass organisation was a procedure absolutely unknown. They did not realise the meaning of this process. Three years later in 1984, all of them except one woman who dropped out express the firm conviction that it is proper to make the selection from within a group of assembled people taking a common decision.

The reason are the following:

The selection should be made according to the ideas that the people have about it. Their ideas should be taken into consideration; A private selection is a mistake; when there is a decision of a group, the selected person feels responsible to the group and the group responsible to the individual. This is bound to generate a reciprocal questioning of both of them. And such habit should exist; in the case of a private selection, people will not feel like cooperating with the one selected, nor give him/her their support. When a meeting is called, everbody will find an excuse for remaining absent.

The model to be followed in the future is as follows: "In a new village or a hamlet, we shall hold a meeting on health and give some information about it. Then, we should tell the people: "To tackle your problems in this respect you should select your own man/woman for that".

Why should this procedure be followed? This process induces the awareness of a reciprocal responsibility; It avoids the danger of pressures of vested interest and the criticism

or the mockery against the one who is chosen; this process assures cooperation, support and participation; there cannot be any real work by an individual alone.

What do these procedures aim at?

These procedures impart information to the people (doctors never impart information about health and thrive upon the ignorance in which they keep the patients; people get a chance to assemble, exchange and make an effort to solve their own difficulties; the objective is to become self-reliant, "to stand on our own feet"; this helps to strengthen and spread the organisation GDS; the intention is to put an end to the deceptive practices of doctors and of the local miscreants who act hand in hand with the doctors; this brings a health knowledge to the village level; this develops a health consciousness; this gives the women an opportunity of having some role and stand in society; this offers a chance to everybody of speaking out.

Let us draw one clear operational conclusion from these data: the perception of health as a collective issue that confronts the whole community is generated here through a social process of cooperation, by the group, of a volunteer. It is not the perceptions of health as a community problem which comes first and leads to a renewed social practice. It is a renewed social practice which helps developing a new approach towards health, as it could have been with any other issue. There cannot be any real consciousness of collective responsibility unless it takes the form of an appropriate pattern of social relation or a cooperative social formation.

How Villagers Perceive Health Animator

Another determining factor, mainly at the initial stage, is the perception of the beneficiaries and their expectations. Four types of reaction characterise these attitudes, in the perception of HAs, which symbolise four cognitive structures through which villagers spontaneously approach this health experiment.

1 "The village has got a big 'doctorin'!" This derogatory remark related to the women health animators. It points out firstly, that the health worker is considered as a 'doctor'! And secondly, that the prestige and honour implied in this image serve conversely, to ridicule people—, especially the women, or the illiterate workers—volunteering for the scheme being projected so suddenly to such a high position! People did not react mainly in terms of the concrete advantages of the scheme, but with regard to the social image of the doctor and to the concept of health as a doctor's commodity both of them turned into arguments meant to throw discredit upon ignorant people pretending to be more clever than they were to involve themselves in these tasks!

2 This work was looked at as sort of employment for the volunteers. As the possibility of an initial honorarium of Rs 50 was known, the task was considered as resorted to by the volunteers under the motivation of this material incentive. The women would then be able to bring their contribution to the maintainance of their husband and children, as they are the *dhana* of the house, its source of wealth, its *lakshmi*.

3 The third understanding is that this task was just a chance offered to the women's eagerness for being 'set free', abandoning the household duties under the pretext of attending training course in health or undertaking health tasks. Only women upon whom husbands and family could not keep a firm control were so allured. Their volunteering showed their lack of social restraint and fear. "Men and women sit together!" "Women just like to follow their whims!" It was almost out of lust that they had volunteered!

4 The fourth image was that through this scheme, a dispensary would be set up, medicines and pills would be made available. In this respect, as people were saying that "an educated man is needed to give medicines", women had doubts about their ability to prescribe medicines, as they were conscious of their ignorance and absence of education.

These data show that two main and anti-thetic socio-cultural cognitive structures gave readymade referential yardsticks to understand and evaluate the event. The first reference relates to the women's roles and image: a woman should never go outside of the home where she is confined to subordinate and non-prestigious tasks. The second reference relates to the prestigious function and role of a doctor as a supplier of medicines and health services. As the health animators were considered as doctors, these two referential factors clashed and as a consequence, the women were derided, for assuming a role of high rank and superior knowledge!

The basic and spontaneous point of view was not a technical or practical approach, but a social reading; and this reading was no conceptual insight nor analytical apprehension. It was a judgement. The cognitive structures worked, as a judicial recognition, not as an act of cognition. If this is likely to be the case in any transfer, its sucess depends upon the will and the ability to develop a conceptual understanding and to refrain from any hasty and spontaneous interpretation by referring to the in-built structures of recognition which can lead nowhere but to a judgement which is only a reduction to the same. This seals the impossibility of any progress.

This is obvious in our case. If the judicial recognition turns into a judgement against illiterate women and ignorant men taking up the role of a 'doctor', as this is simply a contradiction, still a women may be considered as positively motivated to take up this task for the reason that she wants to bring home some income, for the benefit of her husband and her children, as the source of wealth of the house (*dhana*). This is also a very clear cognitive structure regarding the role of a woman. The understanding of her desire to become a health animator is therefore either, negatively, a will to escape her duties at home and the control of her husband, or positively a justifiable intention of bringing home (to her owner, for the benefit of her house) some wealth, as she is a *lakshmi*.

One operational conclusion can be drawn from this. If a health scheme aims at engineering a process of social change, *viz*, a transformation in the patterns of relationship and values, it should and it could boldly create a situation which will directly challenge the cognitive structures mentioned. For that purpose a health scheme should not start with doctors and medical services run by doctors: health should not firstly be looked at as a technical task. Secondly, the leading role in the implementation of the health activities should be given to those women whose health is the most affected by the present health system. These activities should mainly and

basically consist in imparting elementary health education to women and more technical knowledge should come as a secondary dimension. A health animation activity undertaken by women of the lower social sections, taking the initiative of visiting and educating village population is likely to prove one of the most effective levers of social change in the rural areas, as this practice breaks off strongly built-in cognitive structures which have a definitive repressive role and are very significantly responsible for the perpetuation of a particularly degraded health status among women: the partiarchal patterns of relationship and values, and the undue prestigious status of the (male) doctors as the only ones capable of dealing with health and medicines.

Socio-cultural Pressures Against Health Animation

Between 1981 and 1984, out of an initial group of 30 HAs (14 men, 16 women), 17 dropped out (6 men, 11 women), while 18 new comers volunteered (1 man, 17 women). Those who remained involved had collectively analysed the reasons why so many dropped out—26 answers could be specifically given for the defection of 17 HAs. These answers are classified into 9 categories as follows:

1:3 male and 3 female HAs abandoned as they did not obtain the expected financial profit. The honorarium was considered too meagre; even this was discontinued and substituted by small help given on the basis of the days spent on house visits and meetings held, etc. Motivations were put to the test.

2:5 female HAs left under the social repression obtaining against women's assertiveness.

3:2 men and 1 women left for reasons of economic pressure and poverty.

4:3 men left out of diffidence about their own ability and social inhibition.

5:1 man and 1 woman were frustrated in their expectation of a higher status sought through this activity.

6:3 left on account of personal reprehensible behaviour.

7:2 women left because they could not cope up with the task.

8:1 woman could not bear the clash between the knowledge received and her traditional beliefs.

9:1 woman left out of lack of proper motivation.

These reasons are indicative of the difficulties and of the nature of the psycho-social determination of those who maintain their involvement with a renewed conciousness. It is obvious that almost all HAs joined the scheme with the thought that they would get a sort of paid employment thus improving their low social status. As a matter of fact, if all of them could secure through this programme somehow better social position, a qualified social recognition and some social respect—and self-respect—, paradoxically would remain more involved in the scheme than those who were usually deprived of such social respect, often denied the right to talk in the open and assert themselves, while those who already enjoyed some social prestige left an activity which appeared to them as not enhancing their dominant social position, or even countering it.

One should be fully aware of the basic difficulties which any attempt of popular health movement among underdeveloped rural population has to overcome before becoming a strength. If we are convined that there is no alternative to such a movement for bringing about significant structural changes in the health care system, we ought to be still more aware of the socio-cultural challenges this implies in the first instance. Two testimonies may convey the magnitude of the challenge. The first one is the testimony of a woman HA whose potentialities as organiser are totally repressed by her husband.

> I was conducting a balwadi under the sponsorship of VCDA since one year. On this account, I was, therefore, going from house to house to fetch the children. I found many people sick during the monsoon. Althogh they were suffering from simple ailments they were going to the doctors and taking injections. Doctors were coming from outside and knew how to take advantage of this situation; they collected and lot of money from the population for this. I thought: let us do something about these minor ailments, through health education. Then I volunteered to become a health animator
>
> Private doctors do not give information on about diseases, they just give medicines. They come to our villages only to raise money from the population. I started telling people thus and trying to convince them. Six women came together and, through the Association, we requested Dr. Phadke to come and impart health education. The doctor used to come twice a month in the beginning and gave us information about the children's and women's health. We were getting Rs 50 as honorarium.
>
> In the beginning, women called me names. But, later on, opposition become less. People trusted the information that we were giving them and followed our prescriptions. Similarly, they could observe by themselves how the government doctors functioned.
>
> When I had to go and attend a meeting (training camp) and spend one night outside, my husband would object. "Who will look after our daughter who has reached the age of marriage? The younger children are going to school: who would look after them?"
>
> I have now after three year accepted the job of becaning health worker of the government so that the health education that I received during these years is not wasted. They organise only one meeting per month. When VCDA stopped giving the Rs 50 honorarium for the health work, my husband became completely opposed to my participation in these activities. This is the reason I accepted government work. And I continued this health activity with the same motivations that I got from VCDA training
>
> With the government we do not have the freedom to function as we think right; we have to do the work only in a very particular way. Although I have accepted the work of the government I like to attend the meetings and the camps for women of the VCDA. My experience with the government is very different. People get absolutely no health education from them. Only one thing matters: to distribute pills, and to keep monthly records. This is what the health officers consider good and important health work.
>
> Still, one should be able to study as we were doing which questions the women should think over and take up. For instance, women started a movement for clean drinking water, as a result of that education.

The second testimony is the account of the difficulties faced at the start by the group of HAs from Panshet whose level of deprivation makes difficulties more acute. 1) The first crucial question was a doubt about one's own ability to follow the teaching of the doctor. "We shall not be able to learn and study." We were not educated: "We did not know anything about health, dispensary, medicines..." There was no conviction of one's ability to repeat correctly the lessons of the doctor. None of the HAs had ever previously attended any meeting or expressed himself in a group. "For three months I just kept silent in the meetings!"

"We did not realise that we were human beings, as much as any one else. We did not know anything about government officers... We were only busy with our house, fields

and cattle. Where is the government? How to go and meet them? We did not have any idea about it. We had no idea that we had also rights. HAs were requested to commit themselves to assume a social role when they had hardly a clear consciousness of their own identity of social beings.

No wonder this generates a strong feeling of self-diffidence. "I am afraid that people will not come and attend our meetings, nor listen to us." Still, "I am convinced that going out to attend meetings, I shall learn something. How long should we continue to submit and surrender to the leaders?"

Going alone from house to house to give information about health was seen as a great difficulty by some. Some felt it was easier to impart health education in a meeting, within a group, when people are assembled together, because there can be exchanges and discussions, and those who understand can help others to learn.

There was the reluctance to listen to women: "They cannot even behave themselves in the society and look after themselves! How should they come and teach us! Men teased the female HAs, especially after having had their drink, "We shall, all of us, now, become doctors!" "Why make everyone a doctor also like you!"

The pressure of the authority of elders especially upon women makes these latter still more shy and inhibited to undertake something new and unusual. Men complain against women that they attend meetings and report there about the drunkards of the village and all their stupid and bad behaviour, and first of all about their insults against the HAs. The pressure of the more influential male leaders was and remains a serious difficulty for the women who volunteer or would like to volunteer.

The countter propaganda objected that outsiders had come and trained HAs who immediately listen to them and follow them, falling a prey to them. "We should only look after our fields, eat peacefully our pancakes of millet. Women should just go to the fields or to the forest for their tasks, earn a few rupees for the house; this is better than attending meeting and roaming about, everywhere, doing nothing, whiling the time in useless activities which do not yield any income. What will you get (money) from this work? What will these people give you?" Aren't they already 'social workers' in our village? (leaders who are supposed to care for the welfare of the community). Local leaders do often call women names because they follow people from outside instead of going to work to bring home a few rupees, listening only to them and keeping a submissive attitude towards them.

Another type of counter-propaganda says: "What did you obtain and what did you give us after three years?" The understanding behind the objection is that the organisation should immediately bring in some material improvements to show its credentials, to the population, free of charge and without any effort on their part. The reason motivating the objection is also that the organisation "of the poor of the mountain" is approaching directly the administration and demanding the implementation of the government schemes for the benefits of the needy, independently of the local leaders who have a vested interest in the poor depending upon them.

HAs insist upon the reactions of the local leaders who see in the HAs and in the organisation a direct challenge to their authority. "They are not Dhanagars (in one area, many HAs were from this caste), they are foreigners: they come to collect girls and send them abroad where there is a want of girls. One should not vote for them. If they can get four votes, we can still have ten of them... Listen to the head-men of the village. This is not proper. Our women should not talk with men from outside!" "The HAs get plenty of money: this is the reason why they roam about". "They get medicines free of charge and take money from us!" As expected, the same leaders make capital of caste feelings to object to the fact that HAs of different castes assemble together, and do not listen to the caste elders.

A few drunkards come to disturb the meetings, teasing, shouting, raising their voices with the result that people cannot express freely their difficulties, despite their genuine desire to do so. In the beginning we did not know how to handle these trouble makers".

Dynamics of Self-Assertion

The interviews of the new-comers—all women who happen to join the existing groups of HAs reveal the following processes:

1)Personal acquaintances and a prolonged time of "wait and see" attitude preceded any decision. The example and the concrete testimony of some one else are necessary as a preliminary step.

2) A clear invitation to join was made, not to elicit a purely individual move but a commitment to participate in a collective effort.

3) The initial step were met with laughter, counter-propaganda, lack of appreciation on the part of the population.

4) The decision to join was personal and motivated by a will to achieve something and dedicate oneself to a task whose relevance was understood.

5) This understanding increaseed the strength of the personal motivation and developed progressively a wider and realistic social consciousness.

6) The motivation takes momentum, against objections, out of one's own effective commitment to tasks which are experienced as beneficial. Action generates self-assertion.

7) The group proves to be the best support for the personal efforts and commitment: A small group of like-minded people is the essential structural factor.

8) The elements of general personality development (self assertion, ability to express oneself and talk in front of a group, capability to understand a knowledge considered as difficult, etc,...) work as an encouragement.

9) When money is seen as the main motivating factor, no effective health animation can be sustained. Monetary compensation may not go against a real interest in health and health education, but once such an interest is maintained by monetary incentive only, we cannot expect it to develop into a social concern and commitment for health animation and community organisation on health issues.

Antagonistic Perceptions and Conflicting Practices

HAs wished to co-operate with the government health services rather than compete with them. A voluntary scheme is no substitute to public health sevices. The several attempts made by VCDA to operate jointly with the government services met with only a little success. As our concern here is with the local socio-cultural processes, we shall consider only the psycho-sociological dynamics obtaining between HAs and PHC personnel rather than the possible forms of co-operation. Let us give due attention to the perceptions of HAs concerning the behaviour and the attitudes of the government personnel, as articulated in health seminars by HAs.

1. Government doctors are to be seen at the taluka centre and in the villages only in the specific plaees where commodities and facilities are available. Government doctors will always be seen in the company of a limited, restricted and specific category of people: with the sarpanch, the patil, the teachers, and sometimes the talathi and the kotwal. Their social place is with the leaders, the rich, the notables, "with those who talk". They will behave with them with civility. They will be attentive and considerate with the established notables and leaders. They will be seen in their home places. They will accomodate them immediately when these latter come to meet tham and they will attend to them without delay, and show them small courtseys. The government accordingly behave also as local leaders.

2. The attitudes which motivate their way of talking and their behaviour lead them to make a show of their superiority and importance. Their arrogance is resented by the people; they do not let others talk and express themselves. They speak fast and loudly over the voice of others as to frighten the people. Their manners show that others are not worth attention, being all ignorant people. "They consider the poor as stupid and childish". With the poor, they are, insulting and offending their feelings; they do not give answer if poor people ask questions.

3. A few features characterise their language and ways of addressing the common people. They often use words (some special or English words) that people cannot understand, with the purpose of not being understood. This language shows their superiority and "if we ask, we are left with the following answer: "You are ignorant! What can you understand! Don't you have confidence in me?... I told you once, I shall not repeat... and so on they simply do not care for whether we understand or not: nor why we cannot understand.

A second feature consists in not giving information about any disease: they would just hand over medicines. They never impart nor show any readiness to impart knowledge about health and disease. Mainly concerned with cases of family planning, they do not give due attention to the sick. Expectations regarding money are another main feature of their behaviour. The question may often be raised, from the start. If there is no money, the patient may be sent back or adviced to come later, or another day... Money and injections are two main aspects of the doctors' behaviour.

The doctors would also easily entrench themselves behind the laws and rules of the government. They do not appear as responsible towards the population; they are not answerable to the people.

These frustrations and clashes with regard to the medical practices of the government personnel lead to conclusions already often drawn but naturally stressed by HAs in their analysis.

1) The doctor's services are alien to the needs themselves. "Our main expectations is that the government doctors reach us, the poor, who need them. They don't. They never come to the houses of the rural poor". "We don't know what the word nurse mean. If it a thing to be eaten, or an animal?" "We asked the PHC officer to send us a nurse: he just promises but nobody has ever come". Once, at Sakhari, thanks to the firm insistance of HAs, doctors came and HAs helped them to vaccinate the children. HAs motivated and assembled the people. Then the doctors promised to come to another village, Dudhavan, under the pressure of the HAs. But they never did. The false promises of doctors to the HAs are a permanent matter of tension, diffidence and disgust about the government health care system, and its personnel. Another area of tension is the insistance of the government personnel that HAs should bring to them women for being sterilised. The government CHV are supposed to do it, why should the HAs not give priority to this too? HAs answer:

Chart

We HAs	The Government Health Personnel
— We go and visit the poor at home	— They enter only in the house of important people
— We arrange for few cheap and good medicines being supplied to people	— They give importance to medicines
— We give priority to the people	— They give importance to money
—We educate people	— They just distribute medicines
— We look at the patient and give the appropriate medicine	— They don't give all the medicines required to cure the patient
— We think of the whole environment and situation	— They don't bother for the whole environment
— We select HAs taking into account the ideas of the people	— They make private choices
— We organise people for collecting action on health problem	— They don't try to assemble the people
— We promote health consciousness	- They don't bother about health awareness
— Health is a public issue and a political question	— Health is a private problem to be solved by doctors

"You don't give any protection to our childre. Four live and four die. First come and attend to our children, save them and we shall bring you plenty of cases. Otherwise, why should we undergo operations?"

2) The health system is not directed towards the people. Those HAs who were absorbed in the government scheme: "During the training meeting organised by the government every month, doctors and their CHV pretend that doctors are ready to go anywhere. If HAs protest that they have never seen them, that doctors make promises which they never keep... Government doctors and their CHVs look down upon us, repress us as women who talk too much and had better shut up in front of them! When we asked the doctors: "Why do you take money from people, regularly, although you are paid by the government?", doctors reply angrily: "Why don't you take money yourself also from the people?" Doctors insisted and added, addressing a *dai* "before doing any delivery, you must first ask for money from the people". Doctors advise their CHV: "You had better stay at home. Do not visit houses." We, HAs, tell the people: "Go and see the CHV of the government." People reply: "They do nothing. They do not inform us. They do not come and attend us. They tell us nothing, they just give a pill". We tell people: "It is your right to go and meet them and avail from them their services. It is a government service." People reply: "We prefer to come and see you. No improvement is gained from them. They are of no use". Doctors tell us: "You want conflict... You organise demonstrations... We shall also organise such demonstrations... You cannot even sign your name and you immediately strongly reply and object to what we say!"

3) The selection of CHV serves vested interests. In Panshet area, when the CHV scheme started, HAs insisted that women should also be taken, and not only men, and even illiterate women. Some were appointed but no further co-operation could materialise in other places, despite the readiness of the HAs to help goverment officers in the selection and implementation of the scheme.

Conclusion

Strategies of "Health For All" will prove effective when we succeed in translating them into alternative social practices of "Health by the People". The chart on p 50 is an attempt made by HAs of VCDA, on the basis of their experience, to define antithetically, these alternative health practices required as a foundation of a people's health movement among rural marginalised population.

In view of the magnitude of countervailing forces, there is little likelihood of such alternative health practices gaining *on their own* a significantly large and lasting momentum unless (1) they are locally part and parcel of an appropriate wider peasant movement putting out similar roots, (2) externally backed by and related to, other branches and forces of the national health movement and (3) internally born by a permanent self-learning exercise addressing the anthropological, socio-cultural and ideological dimensions of the primary health issues. For lack of space, we did not deal here with these pedagogical, anthropological and ideological components as essential to any effort towards health by the people.

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Immunisation as Populism

A Report

asha vohuman

A mass polio immunisation campaign was launched in Maharashtra in May 1983 with much fanfare. The 'war on polio' was meticulously planned and 6,000 volunteers mobilised, the All India Institute of Physical Medicine and Rehabilitation acting as medical advisers. By the end of July two-thirds of the slum colonies were supposed to have been covered. The article takes a closer look at the campaign and discovers shocking lapses. The campaign it is pointed out, was merely a gimmick created to aid and abet the then health minister's political ambitions.

THE use of health in populist politics is as old as the Emperor Ashoka. But it is difficult to find as blatant an example as the mass Polio Immunisation Campaign launched in May, 1983, by the then health minister of Maharashtra whose "War on Polio" campaign warrants close study for its sheer ambitiousness, and its unabashed use of a health intervention to achieve a tawdry political end.

Before one describes the programme or rather, "campaign", it is vital to understand the motivating factors behind it. The appointment of this particular health minister had been violently opposed even from within her own ruling party ranks. Within weeks of her appointment, there were several moves to oust her for "incompetence" and being for "an embarassment to the cabinet". The Chief Minister apparently warned her that she had to do something to effectively silence her opponents or he would have no choice but to replace her. Evidently, a considerable part of the furore over her appointment was caused by communal factors, since the health minister was a South Indian by birth (though domiciled in Maharashtra for over 30 years) and her Bombay constitutency was also predominantly South India. Yet another source of political pressure on the minister was the falling popularity of her party especially among the poor, who had, in the previous elections, voted largely for Opposition candidates.

Thus it was that the beleaguered health minister had to find a quick means of securing her own position in the Cabinet as well as improve the party image among the City's poor and a means which was within the confines of her portfolio. She hit upon the idea of the "War Against Polio" as the proverbial stone which would kill both birds. We shall see why this was a brilliant choice.

Consider first of all how beautifully polio immunisation in a image compaign fits the bill:

When asked "Why polio?" the health minister reportedly said "other vaccines like triple, the child gets fever. The parents are upset and don't bring the child back for second dose. Also, these reactions would be used by our opponents to spread fear and make the compaign fail. With polio doses, we were confident that this would not happen."

"I had to have a programme which would take my party workers into the slums, doing a good community service, to improve the image of the party among the poor."

"Another thing—anyone could give polio (sic) because it need not be injected. So with polio, I need not depend on medical people to help me. I could use our party people and volunteers".

Several observers of the programme commented on how candid the health minister was, privately, about her political ends. She did not bring in unnecessary rhetoric about which rationale was reserved for public consumption: such as one of the printed "public appeals" which said: "Of all these diseases, polio is the most dreadful... (it) not only causes death but also produces permanent disabilities of varying degrees, which not only makes the life of the children and parents miserable but also burdens...Society. This problem is more acutely felt in the case of female children due to the problem of difficulty in marriages..."

"...There is no specific treatment for this disease, that is why it is extremely important to protect every child by immunisation as early as possible".

Having chosen her medico-political weapon in March 1983, the health minister planned the war with a meticulousness which would do credit to a Field Marshal. It was decided to launch the campaign on May 1, Maharashtra Day, (ironically, Labour day as well) with maximum fanfare. The planners then worked backwards, systematically plotting and preparing each step.

With 30 years' experience as a family physician the minister knew that if the cafeteria approach would work immunisation would have to be taken to the dorrstep of every eligible family. Existing health manpower in the city was not touched overtly because their routine duties should not suffer, but actually because they were unlikely to cooperate and even if they did, it would not ensure that the credit went to the minister's party and party workers.

Thus a broad spectrum of organisations and institutions were approached—colleges and schools (whose students were promised extra marks in return for their participation), "social organisations" (which were by and large communal and caste groups interested in "public service"), clubs like the Lions, Rotary, and Giants, political parties, and associations of the medical fraternity like the IMA. The Directorate of Health Services and the Bombay Municipal Corporation was asked to provide support services in the form of vehicles vaccines and equipment but were otherwise kept on the periphery. The All India Institute of Physical Medicine and Rehabilitation (AIIPMR) acted as medical advisors to the programme. Even the Bombay Restaurant and Hotel Owners' Association was approached to provide cold-storage facilities and ice to immunisation teams to maintain the cold chain at the field level. Within a month, not a single source of help and support was left untapped. By May 1, some 6000 volunteers were standing by.

Meanwhile, the problem of identifying the target areas and members was taken up. In consultation with the AIIPMR, it was decided that the campaign should aim to cover only 0-5 years old living in slums with 3 doses of vaccine. To

determine exactly where and how many, the polio-endemic identified in a survey conducted by the AIIPMR in 1981 were superimposed on ward-wise maps of the city. Teams of student volunteers accompanied by party workers then fanned out into these areas to survey the number of un-immunised under-5's and within weeks delivered the target figure: 1,00,000 children. This enabled the organisers to promptly obtain adequate supplies of the vaccine from the Haffkine Institute.

The campaign plan was now further elaborated and entrustead to a team of 'campaign managers' each with a specific set of responsibilities: e g, manager-volunteers (enlistment, deployment, supervision); manager-vaccines (cold chain maintenance, supply, distribution); manager-publicity (printing, media, etc), manager-transport (commandeering, co-ordination, deployment), etc, etc. Each campaign manager was a trusted party lieutenant of the minister's, personally loyal to her. In addition, a "Ward Chief" (again a trusted party worker) was appointed to co-ordinate and supervise all activities at the ward level.

Publicity came next. By early April, thousands of poster, banners and hand bills were flooding the target areas. Party workers addressed hundreds of local public meetings to spread awareness of the campaign and to enlist more volunteers. But the minister's coup-de-etat was undoubtedly her "padayatra" through the slums accompanied by polio-affected children. In each locality, the crippled child was made to address the people, appealing to them to immunise their children and prevent them suffering a similar fate.

Simultaneously, immunisation cards were printed in thousands to be filled in by the vaccinators and handed over to the parents as a record, to ensure completion of the doses and prevent double immunisation of the same child.

The problem of supplying thousands of flasks to the immunisation teams was solved by asking the volunteers to bring their own flasks. Hotels and restaurants near each target area were alerted a day before to kep supplies of ice ready for the teams. The vials were themselves deployed to there focal points the day before and kept in their deep freesers.

An intelligence system was also set up to achieve an efficient, up-to-the-minute flow of information regarding immunisations performed (area-wise, dose-wise), vaccine supply, member of volunteers and their deployment, and the transport position. The campaign would start on the first Sunday of every month (to enable the maximum member of volunteers to participate) with mop-up operations for each dose on the following Sunday.

This is only the bare bones of the campaign's organisation, since a detailed description would take up a book. But it is clear that little was left to chance of accident—far too much was at stake, politically, for any risks to be taken. One observer records that the team-spirit and hardwork put in by the minister, managers and wardchiefs was most impressive; but also very aggressive, as if daring anyone to criticise or better their efforts.

The "War Against Polio" began on May 1, 1983, with the then Governor of Maharashtra symbolically immunising the first child from a central city slum at 8 am. By 7 pm some 70,000 immunisations had been performed, or 70 per cent of the target figure. The second round was conducted on June 5, with 85,000 doses being administered—60,000 second doses and 25,000 first doses. By end of July, a total of 1,35,000 0-5 years old had received first doses, 50,000 had received two doses, and 85,000 children had received all three doses. Two-thirds of all slum colonies in the city were supposed to have been covered under the campaign. This, of course, is the Gospel according to the health minister's cohorts, and is quite open to interpretation, as we shall see.

Having understood the motivations for the campaign, and the plan of action, we can now take a closer look at what actually happened.

As pointed out earlier, virtually none of the considerable health resources directly under the health minister's command were utilised in the campaign. The role of the state Directors of Health Services, for instance, was limited to ensuring supplies of vaccines and vehicles for transport (though the latter were apparently withdrawn by the Directorate after the first round), printing the publicity material and forms, and "arranging" meetings (though not attending them). One Assistant Director of Health Services is reported to have said: "This is another political tamasha. We are here always; we have to serve the people and face them throughout. These people come and go, so they have to make a tamasha while they are in power". He was also bitter that the Directorate had been ignored entirely because the campaign organisers wanted none of the credit to accrue to anyone else.

Notwithstanding this, a sizeable number of public health service doctors and officers actively participated in the campaign in their personal capacities. They were frankly seeking political favours by associating themselves with the campaign. One municipal health officer apparently absented himself from his normal duties for the duration of the campaign, knowing his superiors could not touch him without risking political retribution.

As for the much-proclaimed involvement of "voluntary organisations", they were conspicuous by their absense. Not a single secular or progressive grassroots agency working in the slums was approached to assist the campaign, despite their initimate knowledge of the local people and their extensive networks. The health minister was dismissive about this, telling an observer "They have done nothing all these years. If they had, we would not have to do this now". An aide was evidently more blunt: "We approached mainly the South India social organisations; we ourselves being South Indian, we felt that they would give a better response. The North Indian organisations we approached did not take much interest. But on the whole, very few of these organisations have done very much... That is why we are relying mostly on our own party workers." In response to why they did not involve grassroots agencies working in slums, the same aide reportedly said, "Why should we ask them? We wanted to show what (our) party could give the people—and have succeeded. Why should someone else take the credit? Can they run the country?" The defence rests.

The poor involvement of medical organisations, particularly IMA members, was interesting. This was apparently because several leading paediatricians advised the health minister not to launch the campaign in May, since epidemiologically this is a peak period for poliomyelitis. Mass immunisation at this time could, in their opinion, actually

increase the incidence of the disease. Other members sheered at the whole campaign as a political tamasha with which they had no wish to associate. The organisers, however, ascribed a different motive to the attitude of the private practitioners: that they couldn't care less about the slum dwellers.

Let us now turn from the medical fraternity to the legion of volunteers (mostly college students) mobilised into vaccination teams. These were the "front-line" of the campaign and therefore vital to this success. It is shocking in the extreme therefore that a campaign in which so much detailed planning and preparation went into every aspect, no one bothered about training the volunteers for their tasks.

On the morning of each of the campaign days, hundreds of student volunteers would be milling around the health minister's residence, without a clue as to why or what they were there for. The majority did not know, until they were actually taken to the sites, that they were to perform immunisations, much less which vaccine was involved. To ask if they were aware of polio, and the concept and importance of the cold chain, was an exercise in futility. One journalist got the following response from scores of students when he asked them if they knew what they were going to do that day: "They said they would explain everything when we reached the place. They haven't told us anything. The college also said these people would tell us what to do".

One eye-witness reported that the entire gamut of information to the volunteers—from maintenance of the cold chain ("Keep the vial in the flask. After you open it keep it in the saucer with ice"), how to measure and administer each dose, what questions to ask the parents, and some contra-indications—was packed into a five-minute lecture at the entrance to the slum, before the teams were give their vials and told to fan out. The claim made by the organisers that each team was accompanied by a doctor, nurse, medical student or student nurse was more fantasy then reality.

Qualified observers who accompanied the teams were horrified at the repeated breaks in the cold chain, and the administration of the vaccine to children with several contra-indications. For example, unopened vials of the vaccine were carried in handbags (not in flasks) for hours together in 38° C temperature (May being the hottest month of the year); opened vials were exposed to sunlight for nearly an hour, with all the ice around it melted away, and then the same vial used to "immunise" more children; infants with coughs, colds, diarrohoeas were immunised; infants were breast-fed within seconds of swallowing the vaccine. This bizarre scenario was compounded by the fact that the same volunteers were rarely present at the next round of the programme. The high turnover of volunteers ensured that each round was as bad as the previous one. No one thought it worthwhile to train these volunteers in even basic procedures to ensure cold-chain maintenance and effective immunisation. But then, this was not really the objective of the exercise.

The real objective of the campaign was well achieved, in the words of one aide: "Our party workers are acompanying every vaccination team to tell the people that this service is coming from the (name of the party). I am confident that in the next election, these sections will vote for our. . .candidate—these slums will be behind our party from now on". One consultant observing the programme confirmed this: "In two slums I visited, I asked whether polio vaccine had been provided by the government. The answer was "No, not by government—by party".

Let us now examine the role played by the medical advisory institution which was assisting the campaign as their technical watchdogs. Far from watching, they followed a "see-hear-speak no evil" policy which destroyed any chance of this politically-motivated campaign achieving some social good. Either the Director of the Institute or a senior associate was present on all the campaign days. But while they admitted their fears about the programme in private, they were far too intimidated by the presence of political power to do so publicity, not even directly to the health minister and her aides. They simply joined the ranks of yes-men surrounding any politician—rendering the Hippocratic oath into a hypocritical one.

What about the people themselves? If reports of the campaign are to be believed, they were far too wise to reject any gratuitous offering, even though few knew what it was. The vast majority of mothers when asked, had no idea that their children had received a vaccine against polio, thinking it was against tuberculosis, measles, smallpox, or tetanus-but none refused. This was simply because in most slums, no one had actually seen a polio-affected child (except in the padayatra) and those who had could not see the connection between the physical disability of a 7 year-old and the pink drops given to the 7-month-old. This is not surprising in view of the fact that the AIIPHR survey itself had found the incidence of poliomyelities to be highest in the lower middle class group and not among slum dwellers. The publicity campaign which the organisers had designed to "create an awareness" was clearly aimed at an awareness of things other than the causes, symptoms, effects and prevention of polio.

As for actual coverage, there was considerable evidence that the elaborate system worked out by the organisers for "initial attack" and "mop-up" phases broke down rapidly under the sheer weight of the tamasha being enacted upon it: entire pockets of "target" slums had not been touched—the teams had covered the peripheries and left; more often, people complained that one round had been completed with the promise to return next month, and the teams were never seen again; in other areas, two rounds had been done before the disappearing act; in some of the poorest areas, cynical parents told a visiting observer "May be them came-may be they didn't. How do we know? Why should we care?".

Consequently, experts who closely monitored the campaign feel that not more than 25 per cent of target children actually received three doses of vaccine, and that under the prevailing conditions, only about half of these were effectively protected against polio.

However high our eyebrows rise, the fact that the health minister retained her place in the cabinet—for the duration of that particular ministry, at any rate—is now history. Heady with the "success" of the "War Against Polio", she quickly abandoned the campaign to her lieutenants to complete as best they could, and moved on to new pastures: *viz*, a "War Against Leprosy". But for the battle-weary poor, one question remains: Will the wars against them ever cease?

Asha Vohuman
C/o Radical Journal of Health

Programming Reproduction?
Maternal Health Services

manisha gupte

In the absence of a basic questioning of women's status and role in society, birth control, abortions and even maternal health care end up merely replacing an old set of traditions with new ones. Do maternal and child health services as they exist today have the potential to emancipate or to further bind a woman to her traditional role albeit in subtler ways? The article contends that the entire primary health programme reflects social attitudes towards women, viewing them primarily as mothers or as potential mothers.

IT is no more a disputed fact that working class women participate in production with men and that like the latter are alienated from the means of production. What makes their position still worse is that women participate more actively in reproduction than men do and yet unfortunately the former are alienated from the means of reproduction as well. Juliet Mitchell argues that as in capitalist production the social product is confiscated by capital, so is the child snatched away from a woman (Mitchell, 1966). Not strictly speaking, perhaps so. In patriarchial society, the child, a result of physiological and emotional interaction is seen as property, and male property at that. Concepts of illegitimacy and patriarchial lineage are examples. A child, created so actively by a woman, grows up in a capitalist and sexist milieu, and alienation occurs through the conditioning and values that she or he absorbs since infancy. Physical alienation does not usually occur because both women and children are conditioned socially not to question or to rebel inside the family. When women do so, physical alienation too does occur in the form of custody in divorce, since custody is more often than not in favour of the male.

The changing role of the family further determines the newer roles that a woman performs within and outside the family. The institution of marriage too on the exterior becomes rather destabilised, say for example through a divorce or through voluntary rejection of marriage by a sexually involved couple. However, the psychological and sociological functions and grip of the family remains the same—it creates the 'masculine' and the 'feminine', resulting in a 'man's world' and a 'woman's world'. It also conditions the newly born infant to accept and appreciate the 'security and stability' that the bourgeois family has to offer.

The prescribed role model of the husband-wife-child determines and influences the roles that men and women perform within and outside the family. As a vivid example, one may quote the doctor-nurse-patient relationship being analogous to the earlier mentioned hierarchal familial triangle. Looking deeper, these role models by virtue of their predecided status determine the extent of food, health facilities, education and employment opportunities that men and women will receive in relation to each other. Therefore, even though women do enter the production force with vigour and compulsion, they inevitably land up doing jobs that are qualitatively and thus economically inferior to those performed by men.

The wage system continues to be structured according to the assumption that a woman's wage is only supplementary. Women are thus seen as economic attachments to men, not as free labourers who participate equally (Rowbotham, 1973). Women are thus financially compelled to stay with their men even in the face of unmasked oppression. Separation and consequently living single or with the children and without a man, often means a drastic drop in the standard of living for women, if not abject impoverishment.

With enforced backwardness, it is also easy to push women out of the labour force more easily than it is to push men out, be it due to automation, unemployment or the omnipresent and omnipotent reproductive duties. Women thus become a reserve army which will work at half pay and who will be reabsorbed by the family if there is unemployment (Rowbotham, 1973). Underpaid outdoor work, invisible domestic labour and conjugal duties therefore leave a woman vulnerable to be doubly exploited. Unfortunately, though the condition of working class women is ideal for the creation of a powerful political force, their realisation of exploitation dissipates instead of being sharpened. The shunting from reproduction to production and back to reproduction acts as a safety valve to smoothen conflict.

The changing role of the family also determines the reproductive potential of the woman. The family in turn is governed by historical inevitability, market compulsions and often by the prevailing political will where reproduction is concerned. In peasant households with considerable landholdings it might be desirable to have as many extra pairs of hands as possible; similar may be the case in not so advanced capitalism, where the quantity of workers needs to be maintained at a high level so that their exploitation through underpayment is possible. With the decline of labour-intensive industry and with the emergence of capital-intensive industrialisation however, the main economic task of the family would no longer be to produce a large number of children, since then quality rather than quantity would be important in the labour market (Morton Peggy, quoted in Mitchell, 1966). The family adapts itself accordingly, and in turn monitors the reproductive ability of the woman to suit the requirements of the contemporary wage market.

The woman in question therefore, is only seemingly liberated to become a wage earner. In truth, however she holds no real power in either structure; in fact forces that are alien, incomprehensible and beyond her control monitor her, both inside and outside the family. In the existing context, birth control, abortions or even good maternal health care, in the absence of the basic questioning of a woman's role in society, end up merely replacing an old set of traditions with new ones. Not only does the woman perform the necessary functions that the traditional orthodox set up demands from her, but she also faces the 'consequence' of being the modern, sexually liberated bohemian woman.

It is in the light of this framework that we have to view

the ideology of maternal and child health (MCH) services; whether they do liberate a woman even marginally, say from the risk of maternal and child mortality, whether a healthy pregnancy and childbirth coupled with birth spacing gives her more choice and more control over her body or whether the existing MCH programme in form and in content, ends up merely making her a more healthy and well programmed baby making machine. In short, whether MCH as it exists today has the potential to emancipate or to further bind a woman to her traditional role, albeit in subtler ways, calls for examination.

MCH: Sexist Bias in Planning

In a patriarchial world, it is no great surprise that male hegemony would exist in all aspects of health care—at the policy level, at the implementation stage and throughout the delivery of this care. Women as a group therefore have to receive health care that is designed in their own favour. Effective health care, provided free of cost and which is accessible to all, especially to women during pregnancy, delivery and the post partum period should be considered a fundamental right. We must fight to see that no woman or child is at the risk of dying, especially during those crucial months. But we must also emphasise that mere MCH will not do. Motherhood is only one of the roles that a woman may voluntarily wish to perform during her lifetime. She may accept it or reject it and in spite of opting out of motherhood or marriage she is a full human being. Health services must be available to women irrespective of their childbearing role.

The entire primary health programme reflects social attitudes towards women, viewing them primarily as mothers or as potential mothers; in fact health services for women have been termed as MCH services (ICSSR/ICMR, 1981). The same report notes that there is positive evidence to conclude that the health status of Indian women has declined over the past thirty five years in spite of improved MCH programmes, mainly due to the fact that women are more 'at risk' nutritionally and yet that they utilise health services less than men do. They are of interest to the health services only when they conceive or when they have reached the upper limit of child bearing permitted by the government's family planning (FP) programme.

The infant mortality rates too are highly unflattering (114 per 1000 live births in 1980 as compared to 129 in 1971) and there has been no appreciable improvement in the nutritional level of children, in spite of programmes directed towards them, neither has primary education become universal.

To shift resources towards women as a group, it is necessary for policy makers to be firstly convinced that women contribute greatly towards world production—within the family, in the agricultural sector, in traditional as well as modern sector industries and also in commerce. An estimate of 18-30 per cent of the world's families are solely supported by women, while in many others the woman's financial contribution is a substantial component (Wayne, 1985). Statistics unfortunately miss family and informal sector activities, resulting in this contribution to the overlooked. Within the health care system, factors that contribute towards women's ill health are not considered—their socio-economic status, total workload, the daily and seasonal pattern of activity, access to health care and so on. Neither are problems which affect women more severely, such as malnourishment, anaemia and occupational hazards, or those which affect women specifically, such as abortion or spouse abuse considered (ibid).

MCH activities, in an informal manner, began in India around the turn of the nineteenth century: mostly voluntary efforts ranging from enrolling women students in medical colleges to training of midwives and Lady Health Visitors. The first transition of the official control over voluntary direction in MCH came in 1938. In 1953, following the introduction of training courses for Auxiliary Nurse Midwives (ANMs) and public health nurses, most voluntary health schools closed down (Sethna, 1978).

The Indian government's official MCH package includes the antenatal, perinatal and postnatal care, the Integrated Child Development Scheme (ICDS), the National Programme for Control of Blindness, the Programme for Control of Diarrhoeal diseases and Family Planning.

There exists undoubtedly a role, however limited, that MCH can play in a woman's and child's life, provided it is universally available and is of high quality. However, in the absence of a woman's control over her own reproduction, a culturally and socially conditioned inability within her to be able to vocalise her gynaecological problems to a health worker, especially male, and the latter's reluctance to bridge the communication gap by demystifying pregnancy, make the MCH a watered down programme, reduced to a mechanical distribution of iron-folic acid tablets, a mindless target oriented approach towards immunisations and endless weighing of children to identify the 'at risk' individuals in an already malnourished population.

The lack of control over one's own body is experienced by many women in the clinic approach to pregnancy and childbirth. Most often, questions that bother a woman deeply remain unasked. The concept that pregnant women should swallow tablets or receive injections for their own benefit without any active partcipation from their own end reveals the ambiguity and myth of 'people's participation' so loftily considered the basis of the Family Welfare programme in India. In fact, passivity is a fundamental feature of the relationship between the providers and users of maternity services (Graham and Oakley, 1981).

Growth charting, accepted so enthusiastically by our health care system is yet another instance of mystification. When less than ten percent of under five children in deprived sections are nutritionally normal, expensive growth monitoring is unnecessary. If 50 per cent of underfives in India (amounting to 55 million children) were to be covered through growth monitoring charts, this activity of weighing and charting alone would require 110,000 workers annually and would incur an expenditure of US $ 27.5 millions for salaries, $ 20.0 million for Salter scales (one per 100 underfives) and additional expenditure for repairs, replacements, maintenance, transport and new growth charts (Gopalan and Chatterjee, 1985).

Such luxurious and unnecessary activity in fact detracts from motivational and educational work which is of primary importance in child health and nutrition programmes

(Srilatha, 1984). In a country with limited resources for child care, a social *group* that faces a high risk of nutritional problems needs to be identified and standard intervention is necessary to *all* their members (Nabarro, 1984).

MCH and Population Control

The scope of the already small package of MCH services is further reduced by making it a screen to achieve family planning targets. There is constant talk of 'integration of MCH and FP' and under this euphemistic slogan, a curriculum for undergraduate students of medicine and interns has been prepared by an expert committee. The training programme has already been adopted by three teaching colleges. In one year, three courses were conducted, which nine teams of twentyseven professors attended (GOI, 1985, p 125).

In the minds of policy makers, MCH figures not as an independent programme but as a means to reduce fertility. The Annual Report (1984-85) of the Ministry of Health and Family Welfare (MHFW) states that 'to reach a couple protection rate (CPR) of 60.0 per cent of eligible couples by 2000 AD, it is essential that the younger group of eligible couples be motivated to accept spacing and the small family norm *... Moreover, use of spacing methods ... has a significant impact not only on curbing the population growth, but also on the health of the mother and child*' (p 116).

The Ministry's own assessment states that the crude birth rate (CBR) at the end of 1984 should have been 32.6 per 1000 population, whereas actually it was slightly higher—33.6. Whereas 29.4 per cent of couples were 'protected' by the end of 1984 (sterilisations accounted for 23.7 per cent of these), a CPR of 60.0 per cent is desired by the turn of the century. To give the FP programme a boost, especially in backward areas, partial assistance from DANIDA, ODA(UK), UNFPA, USAID and the World Bank has been received to cover 63 districts in 14 states as 'Area Projects' for intensive development of health and family welfare. 'The objectives are reduction of fertility and reduction of maternal and child mortality' (GOI, 1985, p 150).

The government has introduced the concept of Net Reproduction Rate Unity (NRR-1) in its FW programme ... "after considerable experience in this regard (need to control population growth), the country has set before itself the long term demographic goal of achieving NRR unity by 2000 AD, with a birth rate of 21.0, death rate of 9.0 (life expectancy at birth being 64.0 years) and infant mortality rate less than 60.0. In order to achieve this goal, the National FW programme has been and will be strengthened. It is a voluntary programme ..." (GOI, 1985, p 164).

In the context of these new goals'set by the Indian government, the stranglehold of FP over MCH can be fully understood. In fact, the first UN Advisory Mission, as early as 1966 had gone as far as to insist that ANMs should be 'relieved from other responsibilities such as MCH and nutrition' so as to concentrate efforts on FP. This mission stated that "This recommendation is reinforced by the fear that the (FP) programme may be otherwise used in some states to expand the much needed and neglected maternal and child welfare services" (UN Advisory Mission, 1966).

The first double-edged tool within the FP programme came in the form of the Medical Termination of Pregnancies (MTP) Act in the early seventies. Regarded by feminists as a much-desired means to control one's fertility, the legalisation of abortions is in itself welcome. However, the government's interest in this legalisation becomes clear when one notes that by the end of March 1984, in all 4,553 institutions were rendering MTP services as compared to 4,170 at the end of March 1983. In Bombay city alone, 50,000 MTPs are registered annually (Karkal, 1984).

The official acceptance of NRR-1 by the government is especially sinister because in lay person's terms it spells that only one daughter should replace her mother. Thus female foeticide through sex determination (amniocentesis, chorionic villi biopsy) or through sex pre-selection (Ericsson, Japanese method) is inbuilt within the government's population control (PC) policy.

The government's emphasis on 'child survival' rings another ominous bell. Welcome in itself, the slogan is reduced to 'spacing methods'. The earlier mentioned Report of the MHFW states that "since child survival is amongst the foremost factors which induce the couple to adopt the two child norm, MCH programme has been given due importance." The strategy becomes clearer when along with the slogan of 'child survival', the government has markedly increased its budget for FP in the Seventh Five Year Plan period and the emphasis will now be on spacing methods for women. It is estimated that by 1990, spacing methods will account for 20.0 per cent of 'protected' couples against the present level of 5.5 per cent. A Contraceptive Marketing Organisation has been registered to promote spacing methods (GOI, 1985; p. 107).

The government now admits that one-third of all IUCDs ever inserted are removed and one fifth are expelled. The officially accepted dropout rate for IUCDs therefore is 53.3 per cent (GOI, 1986). Naturally, the proponents of population control would be desperate to design a centralised and foolproof system that leaves little or no control in the women's hands to withdraw the contraceptive and it is in this context that the importance of injectable contraceptives (ICs) or implants should be understood. Though ICs as yet do not form a part of the FP programme, a Programme-introductory Study on ICs (Net-En) at PHCs attached to 15 medical colleges is underway. Based on the results of this pilot project it is hoped to introduce this spacing method soon. In fact, according to official plans it was to be introduced in 1984-85. The ICMR is also conducting its studies with Norplant—an implant for women. An appropriate version of this contraceptive was to be available by the end of 1985 to start the programme introduction studies at the PHCs (GOI, 1985; p.107).

It has been decided to intitiate a two million corps of women trained to motivate for FP. These corps will be nonpaid and interestingly, acceptors of FP methods themselves. Another significant move by the government in the near future is to disband all male community health volunteers. Through the IUCD programme, it has been learnt that male motivators cannot do the job where spacing methods are concerned. Male health workers have experienced embarrassing consequences while having to explain Copper-T insertions to a woman or to her husband. To close all loopholes therefore women motivators exclusively would approach women targets henceforth.

Motivation: Distortion of Human Relationships

The state's emphasis on women targets and women motivators is a cause of feminist concern for the distortion of human relations which the coercive, target-oriented campaign brings along. When motivators are women, be they the health staff or primary school teachers, they are constantly threatened with dire consequence such as job transfers, sexual harassment, humiliation and delayed salaries it they fail to fulfil their targets. The dangerous limits are reached when these women are the major or only source of livelihood for their families, when they are single, living in an alien village and are unable to complete targets. Recently, in March 1986, Manda Padwal, a female health functionary (an ANM) in Talasari PHC of Thane district committed suicide after reprimand and order from the doctor in charge to sterilise twenty tribals (Barse, 1986).

These women, with the proverbial sword hanging over their heads, are forced to see every other woman in the village as a potential target. All their conservation, whether at the doorstep or at the village well, invariably ends with motivation for FP. Little surprising therefore that the village women resent these motivators and consider them as scheming nags. The entire fabric of woman-to-woman relationships is eroded in this situation, with each party outsmarting the other whenever possible and harbouring deep rooted resentment mutually.

This distortion of basic human relations and support systems has dangerous political consequences. Sexist bias, international conspiracy and the government's population control policy are responsible for the inhuman family planning campaign. Targets are planned outside the micro-environment in which the masses live. Dangerous contraceptives are dumped by ruthless, profit-hungry multinationals. Yet, all of these are invisible to the rural working class. The only visible oppressor they see is a poor ANM like Manda Padwal; most often the latter being from their own class and a victim of the present system as well. Therefore, the anger directed towards another helpless victim helps the ruling class through a divide and rule strategy. Not only does it break working class solidarity, but it also diverts the issues, allowing the real enemy to escape without confrontation. It makes the rulers seem like paternal and benevolent Caliphs out of the Arabian Nights.

As regards the delivery of health services, the 'integration' of FP with primary health care has in fact had an adverse effect on the utilisation of health care at PHCs. A substantial majority of the rural population utilises the private practitioner in times of illness and the major reason for non-utilisation of government services is the absurd emphasis of the latter on family planning. Women still prefer to be delivered at home by traditional dais or relatives, one reason being that any perinatal or postpartum contact with a woman is immediately seized for target completion in a PHC. Immunisation camps suffer because covertly many such camps are used to gather young mothers for Copper—T insertions.

The overshadow of the population control programme over all other essential public health services is resented by people and results in poor utilisation of all these basic services. It is angering that public health services, especially maternal and child services are used as a bait to lure people towards reducing population growth, without any consideration for the existing socio-economic conditions, the helplessness and the inability of the oppressed sections to rebel. In fact coercion thrives on these very conditions, and it is only a conscious, organised working class that can focus on contradictions, unearth the intricate conspiracies and then demand that the health services be geared in their own favour.

The conspiracy of the ruling class and the inhuman strategies employed by them, often in sugar-coated pills such as maternal and child health or as emancipation through birth control, works to control the lives of already exploited populations. Patriarchy, which has the art of adapting itself to new situations, in fact of moulding new situations to suit its end, prevails in policy making research, medicine and science. Our own demands, be they of safe deliveries, of our children's survival and their well being, or birth control, of abortions and the like are snatched away from us and given back to us blunted and decolourised.

Under the guise of giving us the choice, we are made spectators of our own oppression, be it through dangerous contraception, female foeticide, sex selection, surrogate motherhood or the perpetual tight rope walk where our productive and reproductive duties are concerned. It is therefore, necessary to constantly expose this design and to build a strong women's movement that attacks both class and patriarchial control over the various institutions that govern our lives. We have to relate the personal to the political and should constantly question our role as women within and outside the family.

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Manisha Gupte

The Holistic Alternative to Scientific Medicine
History and Analysis

howard s berliner and j warren salmon

The resurgence of the holistic health movement in the US in the 1970s can in part be attributed to increasing consumer dissatisfaction with the present system of medical care delivery. This article traces the rise and decline of modern medicine and the concept of public health by analysing the assumption of hegemony by scientific medicine and its practitioners. Then it describes the challenges that holistic medicine's theories and therapies currently pose to scientific medicine's organisational form and practical content. Holistic medicine is assessed in terms of its organisational and conceptual basis, and the relationship between holistic medicine and the needs of advanced capitalist society is discussed. The article is reprinted in a slightly edited form from the International Journal of Health Services, *10: 1, 1980.*

IN an era of concern over the costs of medical care and disarray in the health-care delivery system, the rise of a countertendency centering on a quest for health deserves attention. A resurgence in the healing arts, manifested through a diverse collection of "holistic health practices," is underway in the United States and Western Europe (1). Movements and theories such as humanistic medicine, transpersonal psychology, parapsychology, folk medicine, herbalism, nutritional therapies, homeopathy, yoga, massage, mediation, and the martial arts have spread widely over the last five years (see for example, reference 2-6). (See also reference 7 and 8).

To grasp the complexity of the emergence of this movement as a social phenomenon today, it is necessary to explore the historical and theoretical dimensions of both the holistic tradition itself as well as the tradition to which it is now in opposition. We begin by describing how the rise of scientific medicine in the late 19th century led to the demise of a prior holistic understanding of health and medicine. Next, we relate the re-emergence of holistic health thought to the broader economic crisis that currently confronts technologically based forms of medicine, as well as to the inability of Western medicine to adequately address the health problems of advanced societies (see refs 9, 10, 11).

Medical Theories and the Rise of Capitalism

In early to mid-19th century Europe, two different theories arose to explain the nature of origin of disease. The first, known as contagionism, postulated that some disease were contagious, spreading via commerce and population migration. the strategic consequence was the quarantine, and the system of quarantine enforcement was intended to shut down commerce and trade to keep disease away from non-infected areas. The second theory, known as anticontagionism, postulated that disease instead resulted from local sources and arouse out of "miasmas" —clouds of rotting matter and filth activated by certain meteorological conditions. The practical outcome of this story was to leave ports and commerce alone, and to eliminate filth and swamps in the disease-laden areas. What makes these previous medical theories of more than marginal interest is their direct association with distinct political perspectives. As Ackerknecht point out (12):

> Contagionism was not a mere theoretical or even medical problem. Contagionism had found its material expression in the quarantines and their bureaucracy, and the whole discussion was thus never a discussion on contagion alone, but always on contagion and quarantines. Quarantines meant, to the rapidly growing class of merchants and industrialists, a source of losses, a limitation to expansion, a weapon of bureaucratic control that it was no longer willing to tolerate, and this class was quite naturally with its press and deputies, its material, moral, and political resources behind those who showed that the scientific foundations of quarantine were naught, and who anyhow were usually sons of this class. Contagionism would, through its associations with the old bureaucratic powers, be suspect to all liberals, trying to reduce state interference to a minimum. Anticontagionists were thus not simply scientists, they were reformers, fighting for the freedom of the individual and commerce against the shackles of despotism and reaction.

The high point of anticontagionism occured just before the political revolutions of 1848. It lost its strength in the wake of the subsequent reaction, while contagionism remained dominant untill its reformation into germ theory in the 1870s.

The leaders of the contagionist movement, primarily high-ranking royal military or naval physicians, were politically unified. The anticontagionists were split between liberals and radicals. Opposing quarantine and state bureaucracy, the liberals favoured sanitary reform by cleaning up filth, purifying drining water, and controlling refuse disposal as solutions to disease eradication. This position attributed disease to a primarily biological condition: the miasma. The radicals instead saw disease (and the miasma) as arising from broader social conditions: the poverty, filth, malnutrition, and oppression bred by nascent capitalism. The liberal position, typified in Britain by Edwin Chadwick's report of 1842, recommended environmental and sanitary reforms that left untouched the production system and its social relations (13-15). On the other hand, the radical position, as typified by Friedrich Engels's *The Condition of the Working Class in England in 1844* (16), fully implicated the developing capitalist system and its class relations for disease, as well as for the class-related incidence and distribution of morbidity (17).

In France and Germany, radical anticontagionists formulated "social medicine", the core of which maintained that resistance to disease was not purely biological but depended on class and social position (18, 19). This orientation implied that the human body could resist or become more susceptible to disease, and that prevention of disease was possible through adjustments or change in the social structure. Thus, in reporting on a typhus epidemic in 1948, Rudolf Virchow, a social medicine physican (and founder of pathology in his later years), called for measures such as free public education, separation of church and state, higher wages, progressive taxation, cultural autonomy for national minorities, agricultural collectives, and full employment (20). With the defeat of the

revolutions of 1848 in Europe, social medicine was virtually obliterated. As the anticontagionists lost power and prestige, contagionism was revived as the leading medical theory.

Nevertheless, anticontagionism had lefts its mark, and the movement of sanitary reform went forward from England to other European countries and America. Between the late 1840s and the 1880s, centralised water supplies, sewage systems, ventilated housing, and improvements in factory construction were all introduced (21). Health standards began to improve. Better transportation between town and country enabled larger quantities of fresh food to reach people. Improved standards of living resulted from successful efforts to gain higher wages and from the general deflation in Europe due to lower production costs (22). Death rates began to plummet. Not ony did sanitary reform improve health status, but it had secondary benefits for capital as well. Centralised water supplies, for instance, removed locational dependence upon rivers, fostering industrialisation. Moreover, water supplies allowed for the design of effective fire-fighting techniques that could reduce the unplanned destruction of capital and lower fire insurance costs. The sanitary movement also assisted in the creation of new industries such as refuse disposal; by the end of the 19th century, trash had become private property—and was collected only when one paid (23). That sanitary reform was controlled by the bourgeoisie meant that it emphasised benefits to capital more than to other social groups. Although far removed from revolutionary class struggles, it was nonetheless progressive.

While the sanitary revolution, as it is called, was proceeding, medical theory was being greatly influenced by technical developments which allowed the visualisation of bacteria. The germ theory of disease emerged in France and Germany during the 1870s and 1880s and became the means for constructing new conceptions of disease and health—conceptions that are still maintained with slight alterations today under the rubric of "scientific medicine."(22)

Germ theory and the theory of specific etiology (single cause of disease) served as the basis for a total transformation of medicine. When germ theory produced its first practical success (vaccines for cholera, rabies, diphtheria, anthrax), popular acclaim mounted. As these discoveries were being made, death rates throughout Europe were falling dramatically, to an extent that was publicly noticeable. Yet, ironically, this decline in death rates was erroneously attributed to germ theory advances, rather than to the sanitary reforms and higher living standards that had actually caused the decline. Studies of death rates for virtually all infectious diseases show them declining precipitously after the introduction of sanitary measures, and well before specific therapeutic interventions occurred (25). Nevertheless, scientific medicine took the credit. The end result was the reification of germ theory, which came to be employed as a total expansion, rather than as a theory that could explain *some* things—but not everything—about disease. Environmental and social factors were no longer considered very relevant to the understanding or causation of disease.

Implications of the Imposition of Germ Theory

Gem theory and the concept of specific etiology were tremendously progressive steps for the development of medicine. Although scientists at the time exaggerated the importance of specific etiology and neglected much previous knowledge about infectious diseases, the importance of these advances cannot be doubted. Germ theory was deeply influenced by the social context in which it developed. The growing strength of the labour movement in Europe, as well as in America, had helped to focus attention on health hazards in the workplace, but germ theory's placement of blame for most sickness and disease on microorganisms served to exculpate industry for responsibility. Scientific medicine, as opposed to the social medicine of the 1840s tended to focus on the biological problems of the individual in order to understand and treat most diseases. The diagnosis of illness was made on an individual basis and treatment or therapy was also individually prescribed.

There are serious problems with this approach, which still dominates contemporary medicine. The physician deals with an individual patient (already a socially determined process) (27). The patient is not an abstract being, but of a certain age, sex, race, and clsss, and has internalised a specific historical experience from childhood to adulthood (28, 29). The taking of a purely medical history individuates the patient; however the disease or injury from which the patient is suffering is received as part of a collective experience in a particular historical, cultural, and social setting. These latter circumstances are as much a part of the cause, and *should be* part of the treatment, as are purely medical facts. (The medical facts themselves are social-historical facts.) Thus the essence of scientific medicine's treatment of disease discourages a proper understanding of disease by excluding from consideration the most relevant internalisation of the external world by the patient. As Wartofsky (30) puts it: "Human ontology cannot be reduced to an asocial or ahistorical biology without doing violence to the very specificity of human biological structure and function itself."

By abstracting disease from its social framework and reducing it to the biological sphere, social conditions could be and were ignored. Scientific medicine became consistent with, and indeed legitimated, capitalist development by integrating a model of healing with the social structure; in so doing, scientific medicine has obscured the relationship between disease and the form of social development. Today heart disease, cancer, and auto accidents are posited as "diseases of civilisation."(31). They are conceived of as necessary consequence of economic growth and industrialism, when it is uncertain that this is so (32).

The greatest decline in the death rate has come from the reduction in infant mortality, attributable mostly to public health measures and not to medical advances. Life expectancy has increased in the United States only when the reduction of infant mortality is included in the statistics—in other words, a man of 60 in 1900 had virtually the same remaining life expectancy as a man of 60 today (33). Despite the fact the expenditures for medical care now constitute almost 10 per cent of the Gross National Product in the United States and are growing at a rate almost twice that of the rest of the economy, it is not at all clear that *health* is improving. Medicine is largely ineffective against the leading causes of death for those under 45 (accident, suicide, and homicide) as well as those over 45 (heart disease, cancer, and stroke) not so much because the biological origin (if any) of these problems is misunderstood as that their social aspects have

been relatively unexplored and unincorprated into medical practice.

Success in finding specific causative agents for infectious diseases led to a particular understanding of causation: the view that a specific biological agent was responsible for a specific disease. This assumption remains at the heart of modern epidemiology, even for the study of chronic diseases.

Epidemiological research, especially after World War II in the United States and Europe, has attempted to link social and economic factors to morbidity and mortality distribution. Social epidemiology, as this type of reserach is called, received emphasis during the War on Poverty programmes of the early 1960s and, at the same time, gave some scientific justification for their inauguration and continuance (34, 35). Studies indicated differences in occurrence, severity, and length of specific illnesses based upon a person's income, race, age, and especially class. While these findings become widely accepted within the discipline of epidemiology, they never had a substantial impact on medical education. (In fact, most health workers, including physicans, are not taught epidemiology.). Yet, just *associating* a relationship between social characterstics, disease incidence, and health status does not fully explain the totality of that relationship. To the extent that social epidemiology was content to remain on a descriptive level, it became merely a form of demography (36). While social epidemiology allows for the use of "multifactorial" explanations for disease occurrence, it still tends to rely upon a notion of specific etiology and sees social and economic factors as contributive rather than causative.

The search for a specific cause tends to preclude a thorough and exact analysis of the particular societal context. This problem can be illustrated by the relation between smoking and lung cancer. While smoking is clearly *related* to lung cancer and people who smoke are far more susceptible, there is no *known* agent transmitted from the cigarette into the lungs which can be said to specifically cause the disease. It cannot be maintained by remaining within acceptable grounds of epidemiological thought that cigarette smoking *causes* cancer, although a high correlation between smoking and lung cancer incidence exists. In other words, where causality is multiple and/or approximate, no firm conclusions can be drawn that are generally acceptable within the scientific community.

If this is true of cigarette smoking, where the effects are relatively apparent, image the difficulty in trying to establish the causative nature of industrial pollutants, occupational chemicals, or excessive noise-all of which clearly fall outside the notion of cause that is accepted by classical epidemiology. Consider the difficulty in firmly establishing the causative nature of specific social, economic or political factors, given these limitations! The methodological emphasis on determining a direct causative link limits the study of many of the more pressing problems of illness in advanced Western society by its reductionist orientation. Moreover, research scientists, as opposed to epidemiologists, often try *not* to think in terms of multiple causation. The following quote (cited in reference 37, p 29) from Lewis Thomas, M.D., president of the Memorial Sloan-Kettering Cancer Center in New York, is indicative:

> It has become something of a popular notion to say that the diseases we are left with, now that we have got rid of the major infections, are in some sense so complicated and so multifactorial, as the term goes, that they have something to do with the stress and pace of modern living—that we can't do anything about them until society itself is remade... I simply can't take that point of view very seriously—not as long as we are as ignorant about the mechanisms of those diseases as we are. We really don't know anything at a dog's level about the mechanism of heart disease, or cancer, or stroke, or rheumatoid arthritis. We can make up stories about them and it could be, I suppose, that they do have multiple causes, and are due to things we can't control in the environment. If that's true—if that should turn out to be true—that would be quite a piece of news. Because it has never happened before. Every disease that we do not know about, and for which we have really settled the issue, so that we can either turn it off, switch if off or prevent it once and for all—every such disease turns out to be a disease in which there is one central mechanism. ...In the case of pneumonia, it's the pneumonococcus, and in the case of tuberculosis, it's the tubercule bacillus, and in pellegra, it's a single vitamin deficiency, and I have a hanch, of course, I can't prove it, that it will turn out to be that way for cancer.

For all the billions that have gone into cancer research, no single etiological agent has been found. But the WHO claims that 80-90 per cent of all cancer is environmental or occupational in origin, hence preventable in some way (38). Although there are constant pronouncemnts on the cause of heart disease (e.g. highfat diet, excessive sodium intake), none appears to be specifically responsible. The most fruitful approach to the control of heart disease may be the alteration of the social environment (i.e. stress reduction) (39). Suicide and homicide are obviously not amenable to biological answers, despite the protestations of the sociobiologists (40).

Therefore, the present understanding of medicine and disease spread is most valuable for infectious diseases—ones that have largely been brought under control in the advanced capitalist world. For diseases that are not infectious, there does not seem to be specific etiology, or a single cure; it is these diseases that constitute most of the morbidity and mortality in the United States.

Popular Disaffection with Scientific Medicine

It is through the study of chronic diseases, the so-called diseases of civilisation, that one confronts the ineffectiveness of scientific medicine. It was not until the discovery of sulpha drugs and antibiotics in the 1930s and 1940s that modern medicine could intervene in the disease process in a specific way with a relatively guaranteed result (excluding surgery, of course). However, this seeming success with infectious disease both increased the expectation of medicine's capabilities and, at the same time, wreaked havoc with the demographic profile of the Western world by increasing longevity. Thus, millions of cases of chronic degenerative disease resulted in people who would not previously have lived past childhood.

Since the 1960s, a growing disaffection regarding medicine has been noticeable. There are several compounding facets to this: (a) doubts regarding the value of a medicine which prolongs life to old age, but often in hospital or nursing home settings and in a manner which tends to deprive people of their human dignity; (b) ethical questions arising from the inequitable access to and allocation of extremely scarce medical resources, e g, artifical organs, dialysis machines, and certain surgical procedures; (c) an awareness that modern medicine has been unable to cure and reduce the number of cases of certain diseases, despite the large sums of money

spent on research; (d) the realisation that much disease results directly from the degradation of the physical environment, the workplace, and the individual, coupled with a sense that medicine does not adequately address prevention on either the social or the individual level; and (e) the explosion in the costs of the provision of medical care to individuals, the government, and employers. This section will expand on these points and relate them to an explanation of the rise of holistic medicine in the 1970s.

While there has been relatively little change in life expectancy rates for those already over 50 in the United State since the turn of the century, there has been a significant increase in the number of people, and the percentage of the population, living to an older age. In 1900 there were only 3.1 million people 65 years and older, but by 1975 there were 22.4 million, with a population projection of 3.18 million aged by the year 2000—perhaps a conservative estimate (33). This will create a pool of largely unemployed elderly, dependent on a social security system warcked with financial dliemmas and a private pension system unable to maintain parity with inflation. Needless to say, the economic plight of the elderly adversely affects their health stauts. Given that the elderly consume more health resources than other segments of the population, this demographic change implies greatly expanded medical care costs. Currently, 68 per cent of the care for the aged is financed by public monies through legislatively guaranteed benefit packages (41). Medicare has continually had the most inflationary outlays due to current hospital behaviour and failings in the largely proprietary nursing home industry. It is not difficult to grasp why the issue of passive and active euthanasis is now under discussion and why a concern over dignity in dying (and even a life after death) is being promoted in this decade (42, 43).

A somewhat related problem stems from the ethics of allocating scarce medical resources in a demoractic society. As sophisticated medical technology becomes evermore expensive, the question of how to decide who should have access to that technology and on what basis allocative decisions should be made pose a series of critical bioethical issues. A whole set of dilemmas have arisen to further complicate this problem. For example, in the United States today all people with kidney disease can get their treatment reimbursed through the end-stage and renal dialysis programme of Medicare, yet poor women have been denied access to legal abortions through Medicaid.

A third facet of the growing dissatisfaction with medicine comes from the ineffectiveness of medical research in adequately answering the most pressing disease problems today. Results of a curative nature from cancer and heart disease research have been negligible, let alone significant in alleviating these problems. While there have been advances on an individual clinical level (44), the morbidity-mortality data demonstrate how limited these have been. In the face of a population apparently not getting healthier, palliative therapies abound for a wide gamut of current disease conditions. For example, the huge consumption of psychoactive drugs in the United States has been given wide attention. One can only speculate on the numbers of people who use some form of medication or drug (e.g. alcohol) to get them through the day (45).

Another facet of the overall problem results from the mounting evidence that much disease, especially heart disease and cancer, results from the degradation of the physical and social environment. Air and water pollution, radiation exposure, and additives to food substances have all been implicated in the disease process and clearly must be addressed if social prevention strategies are desired. Further, occupational stress and health hazards in the workplace reveal additional social origins of disease (38, 46-49). Millions of workers have been exposed to chemicals whose long-term effects on health were previously considered inconsequential (or in some case known to be hazardous but used anyway). Greatly increased cancer death rates among certain categories of workers will emerge over the next two decades. Moreover, the degradation of the individual citizen through lack of exercise, inadequate or inappropriate diet, heightened anxiety and chronic social stress, and other aspects of alienation from labour and life adversely affect health status indicators and drive up the utilisation of health services. What is of special importance about all these factors is that, by definition, they are preventable. Yet, medicine, medical research, and the medical care system continue to ignore the possibility of prevention by not addressing the social occupational, and environmental origins of our current disease structure.

Each of the above points has an underlying economic aspect. The cost explosion in medical care today has established cost containment as the overriding priority in most decisions. With the US economy facing severe problems of inflation and intermittent recession, both corporations (who purchase the bulk of health insurance for their employees) and the Federal Government (which funds services for the poor and aged) are calling into question the amount of money being spent on medical care services (50). The cost of medical care and other associated health services (such as environmental and workplace clean-up requirements) has increased at an exponential rate over the last three decades, making the health sector a leading growth industry. From the corporate perspective, these health benefit costs might have their own justification if the present array of services returned an even larger increase in the labour force productivity via improved heath. But the past two decades have brought significant change in health status, despite this escalation of expenditure. Complicating this problems is the fact that the major portion of health expenditures flows out of the corporate sector and State into the hands of professionals and hospitals. Thus health care expenditure appear unequivocally as a major factor limiting capital accumulation, and a corporate strategy to reduce inflation in health costs is currently becoming evident (51). Replacement of costly, high-technology medicine with cheaper, non-technological therapies is a major redirection advocated by proliferating medical-care evaluation studies (52, 53). Corporations have developed an interest in holistic health as *Forbes magazine* notes, "because it emphasises more money-saving prevention and patient responsibility" (54).

In addition, to the extent that the provision of successful medical care has become a source of legitimacy in advanced capitalism, increasing popular dissatisfaction with current medical practice will become a chief focus of the State (It has become clear for instance, that right-wing political groups have latched on to the public disaffections with medicine through the promotion of anti-abortion crusades, laetrile

legalisation campaigns, etc.).

All of these problems have led to a heightened concern with health in recent years. The holistic health movement has arisen in part out of this concern and in part has helped to generate it.

Holistic Health Movement

There are problems in defining the holistic health movement beyond grouping together all practitioners who place themselves against or outside the mainstream of modern medicine. Further, it is difficult to distill commonalities from the potpurri of alternative therapies, since such a diversity has been linked as a movement by its organisational advocates (1,57-59).

The positive health orientation of holistic therapy has two separate components. The first is the perception of health as a value in and of itself; the second is the notion of health as a praxis—the active participation of the individual in the ongoing maintenance of his/her own helth. Holistic therapies also assume a unity between mind, body, and spirit, the major implication of which is that illness is regarded as more than just physical disease and is assumed to have causes and dimensions beyond the purely biological. The separation of mind and body has long been a philosophical issue in Western thought, and the elimination on downplaying of the mind as a component of the disease process has been considered as of the cardinal success of scientific medicine. The critique of the mind-body duality and the reintroduction of elements of spirtuality in holistic medicine form a strong counter to the crude materialism of scientific medicine in its narrow emphasis on what it takes to be the physical and biological source of disease.

The holistic health movement has philosophically set itself in direct opposition to some of the basic tenets of scientific medicine. The potential power of the "mind" over the "body" is being tested in the treatment of various diseases as practices such as meditation, biofeedback, autogenic training, and hypnosis become quite popular. The exploration of psychic phenomenon (e.g. clairvoyance, telepathy, precognition, psychokinesis, and extrasensory perception) may encourage a new understanding of pathophysiology and ongoing health maintenance. Other practices (such as yoga and the various forms of martial arts) are promoted as aids in forming an integrated view of the individual's health and a greater consciousness of health.

Although it is challenging the taboos of scientific medicine, holistic medicine has not yet established itself as scientific. Holistic therapies primarily have relied upon ancedotal evidence, with "proof" of efficacy to be found in individual testimony. Since scientific theory prides itself on repeatability and universality medicine orientations easily fall prey to charges of quackery and hucksterism. Several factors, however, complicate the picture. For one thing, a number of scientifically established medical procedures and therapies have been found in many cases to be no more effective than treatment by a placebo. This applies not only to certain drugs, but also to various surgical and medical treatments. Indeed, several recent Government reports have criticised the scientific medical establishment for choosing many of its practices more by intuition than by science or study. Most notable is the recent survey by the Office of Technology Assessment, an agency of the US Congress on the safety and efficacy of 17 common medical practices (52). The implication of this orientation is apparent: if scientific medicine were to subject itself to the same rigorous testing that it demands for holistic medicine, many of its forms of intervention would not fare too well either! One may conclude that science, as we presently know it, is insufficiently developed to properly understand the interactions of body, mind, and spirit over the course of the disease process. At the same time, this line of reasoning should not suggest immediate acceptance of holistic medicine and its various therapies without some proof of efficacy.

By concentrating on individuals and tailoring therapies to individual needs and desire, holistic medicine achieves a great degree of client satisfaction. Interpersonal sensitivity and responsiveness to patient's needs ans values which are generally operationalised in the holistic practitioner-patient interface. Since the patient is held responsible for his/her own health (and in many cases, the results of therapy), people are loathe to blame failure of the invervention or the therapy itself. Rather, it is usually assumed that the patient has not tried hard enough, "it's not the time yet," or that the search must continue for the real root-cause of the illness. Often, the power of suggestion and belief plays a dominant role in therapy. For the most part, then practitioners of holistic medicine tend to generate loyal followings for their particular theory and therapy among their clientele. In an era of growing disenchantment with modern medicine, one finds in holistic therapy a popular modality upon which to center one's hope for alleviation, if not elimination, of a plaguing health problem. It is less invasive and dangerous than scientific medicine; it tends to use natural or symbolically ritual medicines or drugs; and because it employs more intimate forms of treatment such as touching, holistic medicine is usually enjoyable and pleasant.

As public support wavers for the scientific establishment, various forms of holistic health care are generating attention and hope from both those suffering from maladies and those wishing to grow in new dimensions of their lives. Nevertheless one finds in the holistic health movement many of the same organisational and social patterns that predominate in the present health care system: solo, fee-for-service entrepreneurial practice; knowledge or skill sold to "consumers" in commodity forms elitist and sexist behaviour on the part of the practitioners; a concentration of availability of services to middle-class, white people able to play; and a clear separation between practitioners and those who are served. Most practices also tend to be focussed on the individual, as in scientific medicine, and lack virtually any focuss on the larger social grouping.

In the midst of the growing narcissism in the United States today, holistic health practices are being explored as part of strivings toward self-growth and self-actualisation (60). In addition, some corportions are beginning to seek increased employmee productivity by offering training in practices such as mediation for stress reduction (61-63). While taking a positive step by including the mind as a causative as well as a healing agent, most holistic practices continue to exclude the external social world from their attempts at healing, failing to provide strategies for changing economic and social relations. Some practices are serving to further commodify

alienation "personal" problems are temporarily relieved as a particular practice tends to adjust the individual to the society from which the pathology has arisen. Thus, this adjustment of the individual may become a prominent tendency (64).

Most holistic practices contain heavy doses of mysticism and charismatic elitism. Their Eastern (and precapitalist) origin often results in an authoritarian elitism that has taken interesting—and—disturbing—forms as these age-old practices have been transplanted into America. The most glowing deficiencies of holistic practices, as they currently exist, arise out of their intense individualism and limited notion of totality. Most assume that they are totalistic by stressing the unity of the body, mind, and spirit. However, this ignores the larger social world outside the body from which much of disease originates. Meditation, for instance, can relieve the effects of stress on an individual, but it does not *remove* the stress source. When one stops meditating, the social stress is still there. A readily apparent weakness of many of the holistic medicine practices is that they ignore politics, declining to connect disease to existing social relations. When these connections are made, the problem is often defined in terms so general—"the West," "modern society"—as to suggest that the only sensible course is exclusive concentration on healing the individual in a chaotic and brutal world. The philosophical thrust of holistic medicine assumes emotional and spiritual dimensions of the individual transcending the physical body. Yet even this expansion still centers on the internal dynamics of the individual to the exclusions of external reality. This, of course, differs from the social medicine of the 19th century, which defined the totality to include the physical and social environment as well as the human organism.

Conclusions

Various holistic medicine therapies are rapidly becoming popular alternatives to scientific medicine. In just a few years, holistic medicine has been able to achieve significant public support in the Western world, as well as the nascent support of both corporations and the Federal Government. It is imperative that health policy analysts and health practitioners understand the nature and content of holistic medicine and the social dynamics out of which it arises.

That holistic medicine poses challenges to the hegemony of scientific medicine cannot be denied. One example is the pressure for the National Cancer Institute in the United States to hold controlled clinical trials to test the alleged efficacy of laetrile in cancer treatment. Some 17 state legislatures have legalised the prescription and sale of lactrile within their borders, a decision made in spite of the almost unanimous opposition of the medical profession. Chiropractic therapy now receives reimbursement from several Medicaid plans and from Medicare. Court cases regarding the rights of people to choose a holistic therapy (i.e, nutritional therapy or laetrile) against the wishes of their physicians, who advocate either chemotherapy or some invasive treatment, have been heard with mixed results to date (see, for example, refernce 65). It seems apparent, though that many more such issues will be fought out in the legal arena. Meanwhile, a groundswell of investigation into alternatives to scientific medicine has been occurring as patients seek out therapies suggested by the multiplicity of articles in the popular press. Bookstores have been devoting higher and higher percentages of shelf space to sections on health, psychology, and the occult; many of the ideas gleaned from this recent explosion in publishing are used by people as supplements—it not direct alternatives—to what scientific medicine-oriented physicians suggest.

Its nontechnological nature and extreme emphasis on individual responsibility for health are aspects of holistic medicine that imply cheaper modalities of care than the present medical care system offers. Those social groups advocating cost containment in helth care have an obvious interest, then, in the explosion, growth, and spread of holistic health care. As noted earlier, medical care inflation has been running at a rate almost twice that of the rest of the economy, and the likelihood of its being slowed down dramatically is quite limited in the absence of major cutbacks in care, which seem politically infeasible at this time. Given this reality, there is a definite political and economic necessity for new approaches to healt and health care problems. Holistic medicine just may fill that need.

Similarly, a changing ideological focus is being promoted in health today. A medical care system emphasising the individual's role in maintaining his/her own health and promoting a significnt lessening of absenteeism among employees would be of considerable value to the corporate sector. It the infusion of holistic medicine modalities into the workplace could keep people on the job and improve their individual productivity by making them either objectivity healthier or at least believing they are healthier, it would serve to address one of the most pressing problems in America today (as defined by corporations): low productivity due to worker alienation. Thus holistic medicine could be of great utility to our present malfunctioning system of economic production.

Finally, if holistic medicine should succeed in giving people a sense of caring for themselves and being the decision-making subject in their lives rather than just an object; if it should succeed in promoting dramatic changes in current, unhealthy lifestyles; it if does provide a more meaningful justification for living in a relatively unpleasant world; then it most certainly will be utilised by greater numbers of people in our society. Yet, by achieving such results, holistic medicine may then become a part of corporate and state strategies for cost constainment in health care. Also holistic medicine could easily be formulated into a social mechanism for allaying criticism of present inadequacies in health care delivery and the social production of disease (66).

We have attempted to demonstrate that the resurgence of the holistic health movement in this decade is no social accident, but clearly arose in response to degenerative social and psychological conditions of the day. Holistic therapies are addressing some of the crises that have been created by the ongoing demise of scientific medicine. It should be noted that scientific medicine is far from dead at the moment, however, and may, with some propitious discoveries, regain its hegemony. At the same time,we have tried to indicate that holistic medicine, to the extent that it focuses solely on the individual and ignores political and social dimensions, is not the entire answer for health either. Nevertheless, holistic medicine is an up-and-coming social movement gaining wide

popular support, and as such, demands attention from all health workers and policy analysts (67-69). This attention should, hopefully, be directed toward uniting people in the transformation of their social conditions necessary for improved health (70).

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UPDATE

News and Notes

Privatisation of Medicare: Help from GIC

THE General Insurance Corporation (GIC) has announced the introduction of a medical insurance scheme, named Mediclaim, with effect from November 3. The introduction of medical insurance should ordinarily have been welcomed as an important step towards extending the benefits of modern health care to the mass of the people. However, the scheme announced by GIC through a high-powered advertisement campaign should instead be expected to, and is indeed intended to, give a strong fillip to the privatisation of health care in the country—and this notwithstanding the fact that the GIC itself is a wholly government-owned corporation. In fact, we have here another instance of how the government and public sector organisations closely collaborate with private business for the advancement of the latter's interests.

The manner in which the GIC has chosen to advertise its Mediclaim scheme tells its own tale. The advertisements read very much as if what is being advertised is a sort of lottery: "Claim medical expenses upto Rs 17,600 a year by paying just Rs 250", the GIC proclaims. Also noteworthy is the prominence given in the advertisements to the fact that the premium paid on Mediclaim policies will be deductible from taxable income under section 80D of the Income Tax Act, making it clear that the GIC is aiming the scheme mainly, if not wholly, at income tax payers who constitute some three per cent of the country's population.

In any case, the terms of the Mediclaim scheme are such that there is no possibility of anyone except the very well-off benefiting from it. The GIC is offering five classes of policies. The annual premium on the least-priced two are Rs 250 and Rs 350 and entitle the insured person to claim 80 per cent of the cost of medical treatment in hospitals subject to a maximum of Rs 17,600 and Rs 25,500, respectively. Under these policies the GIC will pay nothing if the medical expenses are not incurred in a hospital but on treatment at home. Then there are three other more expensive classes of policies, costing Rs 600, Rs 840 and Rs 1,300 per annum, which entitle the insured person to reimbursement of hospitalisation expenses upto Rs 37,750, Rs 52,750 and Rs 82,500, respectively; in addition, under these policies medical expenses incurred on treatment at home too will be reimbursed upto Rs 5,250, Rs 7,400 and Rs 11,500, respectively.

At first sight, the premium rates may not appear excessive. The catch lies, however, in the fact that to be meaningful medical insurance must cover the whole family. Taking a family of five members, the two cheapest policies, which cover medical expenses only in case of hospitalisation, will cost Rs 1,125 and Rs 1,575 per annum, respectively (after allowing for the 10 per cent discount which the GIC is offering where one or more dependents are also covered). At the other end, the premium on the more expensive policies, which alone cover the cost of domiciliary hospitalisation, vary between Rs 2,700 and Rs 5,850 per annum—quite large sums even for those in the upper income brackets. No wonder that the GIC has realised that it desperately needs the crutch of tax deductibility of premium payments to be able to sell Mediclaim. Incidentally, by its very nature, private medical insurance of the type being offered by GIC tends to be expensive. As a result, it can be meant only for a small select section of the population. Even in a country like the UK, according to one estimate, whereas nearly a quarter of professionals have private health insurance cover, for semi-skilled and unskilled workers the coverage is less than two per cent.

If, on the one hand, Mediclaim is meant to cater to upper-income income-tax payers, on the other hand, it is intended to cover the cost of medical treatment in the exclusive private hospitals set up as corporate business enterprises, the rapid proliferation of which has been one of the major developments in the area of health care in the country in the last few years. This is evident from the fact that the hospital room charges that Mediclaim allows for are Rs 550 and Rs 350 per day for the two most expensive policies and Rs 250 per day for the remaining three types of policies. Of course, there is in this country a class of people who can without batting an eyelid pay for treatment at the new private hospitals at these or even higher rates. But it is naturally a small class. So if the private sector hospitals are to continue to attract the required large investments and their number is to continue to grow and their profits are to keep rising, the demand for their services needs to be enlarged beyond that provided by the above-mentioned class of the very rich. This is precisely what GIC's Mediclaim scheme aims to do with the direct help of the government in the form of tax exemption for premiums paid under the scheme, which amounts, roughly speaking, to between one-third and one-half of the private hospitals' charges being paid out of the public exchequer in the form of tax revenue forgone. It should by now be clear how

the government and the public sector GIC are aiding the privatisation of medical care in India.

The GIC's Mediclaim scheme is only one of a series of recent moves by the government to help privatisation of medical care. In December last year the Income Tax Act was amended so that reimbursement by employers of medical expenses such as operation fees, hospitalisation charges, cost of medicines and tests, etc, incurred by employees and their families is no longer treated as a perquisite. In other words, the amounts so reimbursed are not now added to the taxable income of the employees. The term 'employees', it has been specifically provided, is to include "managers/directors" (with their families). The Income Tax Act 1961 already permitted government employees to receive such tax-free reimbursement of medical expenses. This benefit has now been extended to those working in the private sector and in public sector undertakings.

The change in the tax treatment of expenditure on medical expenses has to be seen together with some other decisions of the government to appreciate its full import. Under the scheme to encourage non-resident Indians (NRI) to invest in India, hospitals have been included among the areas qualifying for NRI investment upto 74 per cent. Later the definition of hospitals was enlarged to include 'diagnostic centres' as well in order, as the government press note on the subject put it, "to facilitate the inflow of NRI expertise and investment in the area of medical diagnosis through specialised and sophisticated equipment not readily available in India". Apollo Hospitals in Madras was the first to come up in response to the government scheme, as a public limited company with non-resident investment. Others have since followed in its wake.

In addition to these specific measures to facilitate their growth, the government is only too ready to give the private corporate hospitals legitimacy and respectability. For instance, while inaugurating its Diabetes Foundation, the Vice-President of India acclaimed Apollo Hospitals as "the first fully-equipped, corporate, multi-speciality hospital in India" and added, "I have had the privilege of being associated with the development of this unique all-round medicare facility". What followed was even more explicit underwriting of private medical care at the cost of the facilities provided in government hospitals. The Vice-President said that to depend on the government alone for health services would be to reconcile oneself to mediocrity and paucity of such services. In other words, because government health services are of indifferent quality and inadequate, the government needs to support private establishments such as Apollo Hospitals.

This is a piece of deliberate misrepresentation, for the high-cost private sector hospitals with their high-powered doctors, their sophisticated diagnostic machines and therapeutic aids provide an altogether different type of medical care from that provided by the government health services and to an altogether different class of people. Far from making up for the undoubted deficiencies of the public health services, privatisation of medical care with the active support of the government is bound to further distort the priorities of the government's health policies and thereby further choke the flow of resources and qualified medical personnel to the government health services, rendering them even more unequal to the task of providing health care for the mass of the people.

K R

Legislation of Abortion in Yugoslavia

Yugoslavia is a country where abortion is legal and very simple. It is sufficient that the woman chooses the hospital and the gyneacologist, pays about 50 guilders for the whole treatment including the anesthesia, and she is back home the next day. All this is due to the very good laws and to a struggle that the women of Yugoslavia won fighting against the conservative behaviour and practice. The struggle for various women's rights including the right to decide about her own childbirth, dates in Yugoslavia from the second world war. In 1952 the interruption of pregnancy was legalised but only for medical reasons. The social reasons were accepted too. From 1960-1978 the abortion had to be approved by a commission, instead of the woman herself. Various commissions had different opinions, which made it impossible for women to use their legal rights. Although the commission approved of 97 per cent of the petitions, in order to lessen the tension for women and to liberate them from the haste, and all the waiting in the medical clinics, women still made further efforts to liberalise the law even more.

A new law was passed in 1978 and according to it the decision about childbirth is a personal matter. A part of the law is about contraception: the rights of people to learn about contraception and the planning of the family is acknowledged. Sterilisation is allowed for persons older than 35 or if there are other medical reasons. The main feature of the law about abortion is that every woman has the right to ask for it, that they are safe financially, and institutions are available, which is very important. And that abortion can be refused for medical reasons. The law makes it possible for a woman to have the abortion after a medical examination on her request, till the 10th week of pregnancy. From the 10th to 20th week and later it is possible only if the commission finds it not dangerous for the women's health. Persons under age can also ask for it, but with the agreement of parents or the person responsible.

After bringing up the free law the number of abortions has increased a great deal, which is alarming considering that Yugoslavia has about 22.5 million inhabitants and the number of abortions done annually is about 300,000. There are some parts of Yugoslavia where the number of abortions is larger than the number of births. In Servia there is one birth to 1.4 abortions, in Croatia one birth to 0.75 abortions. And it is still increasing.

In Yugoslavia contraception is not very popular, there are not enough services for it and young people are not well-informed about it. Although the number of services is increasing, only 40 per cent of the women use contraception. A lot of women still use abortion as the only method of contraception together with the traditional methods—39,000 abortions have been done on married women out of 40,000 that were done in Croatia. The figures tell us that the planning of the family is not valued. Sterilisation is very unpopular, men do not ask for it at all.

[Abridged from *Women's Network on Reproductive Rights Newsletter*]

Fifth International Women and Health Meet

WOMEN health activists, researchers, and practitioners form all over the world will gather in San José, Costa Rica next spring for the Fifth International Women and Health Meeting. The Centre Feminista de Informacion y Accion (CEFEMINA) is co-ordinating the planning for the conference, which is scheduled to take place from May 23 to 28, 1987. This marks the first time the meeting will be held in a Third World country; the previous four meetings have been held in European cities.

The conference will focus on five main themes: population policies and reproductive rights; community health; environmental health hazards; drugs; and the health care system. The organisers welcome any suggestions for specific workshops to be organised under these categories as well as general input into the planning of the conference. Meetings will be held in Spanish, French or English, with simultaneous translation available for plenary sessions. Childcare facilities for participants' children will be provided.

The conference organisers also urge women who want to attend to begin fund raising immediately to cover travel costs and expenses. Those who can are encouraged to help raise funds for women who cannot cover their own costs.

Eleven national and international women's organisations, including Isis International and the Latin American and Caribbean Health Network which we co-ordinate, are sponsoring the conference. The others are Peru Mujer, Centro Ecuatoriano para la Promoción y Acción de la Mujer, Women's Global Network on Reproductive Rights, International Baby Food Action Network, Health Action International, SOSHIREN Tokyo, Isis WICCE, Dispensaire des Femmes, and the Boston Women's Health Book Collective.

For further information please write to:
CEFEMINA, Apdo 5355, San Jose 1000, Costa Rica.

Ills of Public Hospitals

Recent events have drawn fresh attention to the atrocious state of public hospitals all over the country. The glycerol tragedy which is unfolding every day in the courts in Bombay can well serve as a case study of the degree of inefficiency in these hospitals. Even more disconcerting is the fact that the doctors and the officials appear to be exhibiting a degree of nonchalance which can only be termed inhuman and callous. Officials have admitted that no action was taken other than issuing a routine alert, and that after a delay, even though several similar deaths had occurred in a single ward; doctors have confessed that they did not deem it important to read circulars marked urgent; and units have been found to have continued to use the same batch of suspect glycerol for 48 hours after an order was issued to impound the batch.

It was around this time that the doctors at KEM hospital in Bombay went on unique strike with the sole objective of highlighting the utter lack of adequate and necessary facilities in the hospital. And what they had to tell the patients was indeed a revelation—substandard equipment, operating theatres with fungus growth on the walls, machines sitting idle for want of simple repairs, shortages of drugs, and so on.

However, all this attention on the inefficiencies of public hospitals has given rise to a feeling that the only choice then is to make use of private practice facilities, even if one has to foot the fabulous bills later on. In fact, state governments, like Uttar Pradesh have already set in motion, plans to hand over rural health care to private sector.

There cannot be a more mistaken notion than this. The roots of the malady in public hospitals probably lie in the proliferation of private practice and private hospitals. And it is these hospitals which have received enormous support and patronage from the government even as the government-run institutions have lacked both finance and other support. There is need to look more closely and critically at the relationship between the private and public institutions. Today the state is openly admitting its inability to provide welfare services such as health and seeking to move its responsibility to the private and voluntary agencies. Can the government abdicate its responsibility to provide 'welfare'—even if it is rudimentary? Have we as health activists been altogether more concerned about evolving alternatives than with pressurising the government to be accountable?

—p p

Female Patients versus Male Doctors' Universe

jytte willadsen

How does medicine view women's health problems? In recent years the women's movement has posed many questions to medicine which has in turn set the medical establishment thinking. This article is an 'insider's view by a Danish woman psychiatrist and discusses how bias influences both the diagnosis and the treatment of women's problems.

SCIENCE is unscientific in the way it analyses and treats women. Virginia Woolf says, "Science it would seem is not sexless, she is a man, a father and infected too".

It is very important and essential to confront the medical world with feminist viewpoints. You may then be able to explain many otherwise unintelligible problems and treatments. If we raise the consciousness about this confrontation we can go ahead in a much wiser way and otherwise we will obtain impossible results in the treatment of women patients. In the industralised part of the world women live about seven years longer than men do. Why is it so? On the other hand, depressions are much more widespread in our societies among women, and women are depressed between three and six times as often as men. What's the explanation of this? Women go to see their doctors twice as often as men. Is this good or bad? Women are drugged twice as often as men, and many healthy women are constantly under the control of an artificial intake of sex-hormones, while healthy men as a rule don't take hormones. Why is it that men most often abuse alcohol and drugs? Why is it that nearly exclusively, men are imprisoned?

Women's Biology

Women have a wonderful biology. Our life is cyclic and cyclicity is an underestimated richness. From puberty the woman is constantly changing. She is influenced by a hormonal balance which all the time changes quietly, little, just like the moon and in the same pace as the moon. Every 28th day women menstruate and after this, in the middle of the period, we are in ovulation. After this and before the next menstruation we have the premenstrual phase, where many women feel extra energy, extra power and vitality. During menstruation many women feel their womanhood confirmed and sealed. Some times the female cyclicity takes other forms. When you are pregnant you are in a long cycle of nine months, where you feel new changes, new hormone balances controlling your organism and from moment to moment you and your child are in quiet change and movement towards birth. The birth itself is a series of oscillations and the labour begins quietly and slowly. As the labour continues the oscillations become more and more intense, until the child is born. Afterwards a new cyclicity arises and you find a new hormone balance with new experiences. When you nurse the child, your breast slowly fills up and afterwards your love to the baby slowly and peacefully empties the breast again. This sort of cyclicity continues until you again return to the ordinary cyclicity and the ordinary menstrual cycle. May be after more pregnancies with ordinary cyclicity in between, you at last reach the 'large' cycle, the climacteric, where you experience the menopause and your organism again reaches a new hormone balance in quiet pace. For some years you then will go on this balance until old age and death.

The female doctor and psychoanalyst Therese Benedek wrote a paper, 'Climacterium a Developmental Phase'(1950). She found that psychodynamically the female sexual cycle involves a greater integrative capacity within the personality. Thus when the approaching menopause diminishes the fulctuations of the sexual drive, the ego is flexible enough to use the energies released from previous tasks for new integrations. In other words, the female cyclicity is an advantage because it creates flexibility to manage new life situations and use the energies in a new and satistying way, as may happen in the climacteric.

Margaret Mead talked about the postmenopausal zest and as you know she herself enjoyed her zest and many of her world famous works were made in her postmenopausal phase.

Karen Blixen, Danish female author, wrote in *The Caryatids, an Unfinished Tale* (1957), "He watched the figure of his wife, sunk in musing in the carriage seat. He recognised the thoughtful mood which had come over her, the wave-motion of her being, following the rhythm of the moon like the tidal waves of the sea. It was as if a weight was being gathered grain by grain, within the depth of her, balancing down her vitality into a new calm and a deeper understanding. Sometimes she would disappear from him altogether for a day or two, but only to come back, radiant, as from a flight into a distant world from which she brought with her fresh flowers to adorn her home." When we talk about the female cyclicity, the phases in our lives, in this way, it is difficult for many of us to recognise ourselves. Also in my daily life, femininity is quite different from the way I have tried to describe it here.

Menstruation

You see the problems clearly in advertisements. An ad from a Danish paper "Girls! Be balanced every day! Menstrual days and the climacteric don't need to be problems! Take the new Melbrosia pill every day." The advertiser trusts in our imbalance and especially in that we feel it.

In an ad for doctors, the drug company offers hormone therapy for premenstrual syndrome (PMS) and the pill is said to remove irritability, crimes, accidents, breast tenderness, emotional turns, headache and so on. This is an audacious claim by the drug company, because premenstrual syndrome lacks scientific proof. In connection with this ad we had a debate in the Danish media. Female doctors emphasised that crime and accidents primarily are male problems and that it was farfetched to believe that women should need treat-

ment with hormones to prevent crime. After a long debate the company at last admitted that the ad was not objective and it was then withdrawn. In a mass-circulating newspaper a cartoonist showed his new understanding—his cartoon showed a battered woman calling the drug company, "Can't you produce some similar hormones for my husband—but they have to work every day." *Menstrual troubles: Symptoms, course of disease, treatment*, is the title of an informative book for all women. It was published after the debate, and the author is one of our prominent gynaecologists. From an illustration in the book you see the endometrium changing through the period. At the top of the picture is an illustration showing how the woman feels. She looks free and well until the last days before menstruation. Then she is shown to be sitting down and she looks like a person who is unable to do reasonable things. It is interesting to look at this picture and at the same time be conscious of the fact that this is never scientifically shown to be a normal situation for women. Some healthy women can feel negative sensations in the days before menstruation, but other women can feel the opposite or nothing and this is totally forgotten in medicine.

In medicine a woman is regarded as a handicapped man. It is considered a negative factor that she may be premenstrual or menstrual or in ovulation and that she may be pregnant or in puerperium and for a certain period she may be nursing and later she will experience the worst, the menopause. A women is thus always in a 'special condition'. She is never okay, but what about the original model, the man?

Some female doctors have studied 'the man' and we plan to publish a book with the title, *Testosteron troubles: Symptoms, course of disease, treatment*. As yet nobody has taken care of the poor man with this strained condition. We will stress, that the level of the man's testosteron concentration in blood is nearly always the same, and as everybody knows, men are always in the same spirit. But many men suffer from testosteron poisoning, and they are in the same aggressive condition all the time. We hope very much that we can help them, but until now we have no sure and certified method of doing it.

Giving Birth

In Denmark nearly all women give birth in hospitals and both the labour and the condition of the child are monitored in several ways. It is difficult to imagine how women giving birth will be able to experience the many sensations and great moments in their lives, when they are treated as patients in the hospital milieu. We know that women nowadays are at a larger and larger risk of having to undergo Caesarian sections so that their experience of giving birth will be an experience of being under narcosis. And what about the children? Is it good for them to come into the world and live without the normal experience of birth? Of course it is advantageous that we have the possibility of a Caesarian section when it is really necessary, but is it with advantage that we perform the operation more and more?

Climacteric

In ads for the climacteric the drug companies tell us that we can do something for this otherwise hopeless situation. Hormone therapy solves the problems. The atmosphere in illustrations is depressing and resigned and often against the background of rainy weather or autumn.

In Denmark two well-established male gynaecologists have written an 'informative' book about the climacteric. It is issued in the same series as the book about PMS mentioned above. The title is, *The Climacteric: Symptoms, Courses, Treatment*. The book has illustrations presenting the woman before and after the menopause. You see a profound change between these illustrations. The postmenopausal woman is fat and her appearance is totally without charm. We must wonder why male doctors want us postmenopausal women with zest to identify ourselves with such pictures of women.

The diagnosis of the menopausal syndrome was first introduced to English-speaking doctors late in the last century, and it became an instant success. Joel Wilbush (1981) in an article, "What's in a name? Some linguistic aspects of the climacteric " views the diagnosis of menopause as a 'wastebasket' and the introduction of this diagnosis in the last century gave little offence. It was an excellent label which satisfied doctors and patients alike.

It is important to stress the lack of proof of the connection between mental illness and menopause. In Sweden Tore Hällström (1973) undertook a thorough epidemiologic study of 800 women and found no correlation between the menopause and mental disorder. In Denmark, a study including all patients in the psychiatric institutions has shown no peak in the number of patients in the middle years per number of inhabitants in the same age group. Weissman and Klerman (1977) in a comprehensive review of the literature concluded that there was no evidence that women are at greater risk of depression during menopausal period.

Many men and women feel that menopause is the worst experience in the life of a woman. And some even claim, that it will leave her as a castrata for the rest of her life. In the treatment of menopause the most important task of the doctor is to give the women careful and factual information. It is necessary to distinguish facts and myths. I would like to stress once again that no mental disease has ever been proven to be caused by the menopause. Therefore hormonal treatment cannot be expected to, and has never been proven to alleviate such diseases. When the woman is well informed it is up to her to choose whether and for how long she wishes to have hormone therapy. The informed choice of the woman is much preferable to an authoritarian decision by the doctor.

Depression, Thy Name is Woman

Now let us take a look at depression. Depression is a 'woman's disease' and it is up to six times as common among women as men. Today most psychiatrists and psychologists agree that we see quite smooth transitions from the normal sorrow to very deep and serious depressions. The psychiatric diagnostic apparatus is here, as in many other places quite uncertain and unstable. In all the professional textbooks you find the description of the depressive person as passive with lack of initiative, lack of self-confidence, introjection of aggression with subsequent feeling of guilt and with a lack of sexual desire and performance, men are impotent and

women frigid. Here it's essential and interesting to remember Freud's description of the normal woman and after him, many other identical descriptions. Freud tells us that the normal woman is passive with lack of initiative, lack of self-confidence, as a rule she introjects her aggression and she cannot show her anger, is inclined to feeling guilt and sexually she is masochistic. As you can see the two descriptions are rather alike. Indeed they are nearly in accordance word by word. Yet the normal woman is labelled as masochistic, which I think many feel is worse than the depressive woman's frigidity.

Freud's and other description of the woman is, I'm sorry, current also today. Women's sex role is a norm which in many ways demands passivity. When passivity is pronounced, depression will follow. It is more than hypothesis that the female sex role in many cases is the same as mild depression. And when the woman experiences psychological traumas, strain and so on, she overplays her female role as a defence and then she develops a more severe depression (Willadsen, 1983).

The bringing up of girls is an upbringing to passivity, to potential depression. In many situations it can be easy to be passive and it is important to understand the tempting aspect of convenience of the female sex role. You can identify female passivity and helplessness in many ways.

Have a look at the language. Sheila Rowbothan says in *Woman's Consciousness, Man's World*: "As soon as we learn words we find ourselves outside them. We need a language which constructs the reality of women's strength, women's power. When you are angry and want to express your strength and power, you have not your own words for it".

The normal result of the normal upbringing of a girl, is a mild, attractive and kind woman and whatever happens she will stay by her man. Often she cannot manage to accept this normal sex role, and cannot find her psychic balance, and then, nowadays, very frequently she ends up a depressed woman. The depression is for her a flight from an intolerable life situation and in the depression she can relate to her surroundings although in a negative way.

Hysteria

In other cases the women ends in another exaggeration of the female role, the so-called hysterical personality. In the leading Danish textbook of psychiatry our first psychoanalyst (Vanggaard 1985) as late as last year writes about the classical hysterical personality, "A known example is the colourful, lively, attractive and seductive woman, but it turns out that she is not serious. In intimate sexual relationships she is frigid. Even outside the narrow erotic sphere the inviting, charming and seemingly emotional attitude of these persons can impress people—often resulting in disappointment at a larger moment." The editors of the textbook, five other male Danish psychiatrists, all in high positions, have not commented on this outpouring. You see the alarming distance from women's reality. It's the same in many well-known international textbooks.

In the USA's diagnostic statistical manual, the commonly used diagnostic system in the States, DSM III, the term hysterical personality is abandoned and it is now called 'histrionic personality disorder'. In the description in the manual you see that the histrionic personality is described in the light of the usual oppressive concept of women. There you read that histrionic personality disorder is diagnosed far more frequently in females than in males. Such individuals are typically attractive and seductive, superficially charming and appealing. They are demanding, egocentric, and manipulative. They may be sexually unresponsive and in both sexes overt behaviour often is a caricature of femininity. All these pejorative descriptions are known in all sorts of psychiatric literature. The hysterical or histrionic woman is accused directly of looking lovely and being attractive and, at the same time, of being unreliable in their sexual accessibility for men. They bypass the traditional norms and are accused of using the femininity in order to manipulate the surroundings. The textbooks forget the simple fact that behaviour that is rewarded will be promoted. The behaviour of the hysterical women is, of course, determined by their living conditions. The essential issue is the deleterious lack of real female life realisation. Hysterical symptoms act as a substitute and they can be regarded as a caricature of the demands to women's behaviour in general and her sexual life in particular. Hysterical symptoms are distorted communication with the surroundings and an attempt at protest against the conditions. The hysterical person lives under the motto, "Don't think, don't know, don't feel". You have to act as another alien person and to satisfy the needs of other instead of your own, and at that be so kind as not to see through it.

In the Danish textbook the psychoanalyst also writes about the spouses of the hysterical patients. He finds it surprising what many spouses are willing to acccept the hysterical personality. There is really no basis for surprise. Lawrence Durrell formulates so shrewdly: "We get the partner who corresponds to our own inner ugliness, i e, when we look for a partner, our negative aspects will be decisive, while the positive aspects will be without any consequences, because they will be accepted by everybody. The hysterical woman will often marry a special type of man, superficially he is clever and permissive in relation to her, but if you analyse the relation, you will often understand that he plays his own game. For his own good he keeps to the hysterical because he experiences himself as strong and important and as safe as possible in his male role. At the same time he 'fixes' her symptoms because he can't do without.

The label frigidity is often linked to the hysterical. Sexologists have tried to replace frigidity with general sexual dysfunction of the female. They have tried to be progressive, but in vain. Frigidity is essentially the women's skewed protest against participation in the traditional sex life, when everything is dictated by the wishes and needs of the man. She experiences all of it as an attack against her integrity. Many womens suffer from lack of sexual life realisation. The woman's common inclination to passivity explains that she often finds herself to be, what we call, frigid or suffers from sexual dysfunction.

I have read Sheila Kitzinger's *Women's Experience of*

Sex (1983) with great profit, and in many ways I agree with her. She writes in the postscript that she has learned much from writing the book. Before writing the book she took it more or less for granted, that sex therapists must be right when they talk about female sexual dysfunction and when they often use therapies to help women adapt without questioning the social values and codes which impose on us particular kinds of sexual behaviour and assumptions about sex.

It's a fact that nearly all diseases occur with a skewed sex-distribution. In every textbook you find the unequal sex-distribution mentioned. But without any analysis and without recommendations for prevention and cure of the diseases in this light. Drugs are used widely and it is alarming that many, many healthy women are medicated in several ways. In gynaecology, hormones, as I mentioned before, are often used in the treatment based on myths about women's biology and sexual life. The same happens in some cases of gynaecological operations. In general practice the treatment very often is a drug treatment and it is the general practitioners who prescribe most of the psychotropic durgs. Most of them are sedatives but they also issue many prescriptions for antidepressives and neuroleptics.

The pharmaceutical industry is aware of the sex of the doctor and the sex of the patient,. In the ads you often find the attractive woman, with a nice hairdo, make-up and posture and the elderly grandfather-like doctor—he usually has grey hair and a bald spot on top of his head just to inspire confidence. If his patient is a hysteric who cannot manage her frigidity or a depressive who suffers from passivity and lack of self-confidence, where can she go for better treatment, than to the psychotherapist?

Many patients feel that the psychotherapist puts them back in their box and not to a worthy life outside the fixed conventional role. The male society makes its demands. A woman has to be the good wife and mother and at the same time she is expected to be attractive and be able to manage competition from pornography.

Can men (as psychiatrists or doctors) treat women? It is a difficult question, because it depends on the scope of the treatment. In the treatment of the weakest patients it necessary to work with very limited purpose. It's a sort of camp hospital treatment at times where you cannot free the patient from war. If the possibilities are better and the woman has resources and can depend on a supportive social network, then she can go ahead and develop her personality. I'm sure she needs help from others who understand her suppression. Some few male doctors do, and honestly many female doctors do not. We are educated in the male medical world and we have internalised so much.

Voluntary helpers and self-help groups sometimes can be good solutions for women with psychic problems, but often they have very few resources. It can be difficult to offer the necessary steady help. The society should on one side support the pioneering initiatives and on the other side, learn from them and transform the established treatment apparatus accordingly. More importantly than appropriate treatment, we need to raise the woman from childhood to a realistic concept of her own biology and psychology. Then she will appreciate her cyclicity and not be apt to biologise her problems, and more or less unconsciously overplay the normal sensations in the female biological cycles. We need to be conscious of our problems and try actively to solve them. We will define our femininity ourselves rather than to accept the traditional definition put forth by men.

When we meet psychic problems, it's necessary in the earliest phases to be active, to take responsibility for ourselves, to use our anger and aggression and not to introject all of it. In every way we have to counteract the objectification of women in our society. I think our sex life is most important. We must be aware of our sexual position.

Clara Thompson (1942) wrote, "The characteristics and inferiority feelings which Freud considered to be specifically female and biologically determined can be explained as developments arising in and growing out of western woman's historic situation of underprivileg, restriction of development, insincere attitude toward the sexual nature, and social and economic dependency. The basic nature of woman is still unknown." The basic nature of woman is still unknown, we must acknowledge. We owe our children, our species to discover it. We need to think, to know, to feel, if we dare, and if we manage it will give our species a much-needed survival value.

[Paper read in a slightly modified form at the 2nd International Feminist Bookfair, Oslo, June 21-27, 1986]

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Organising Doctors: A Difference in Approach

Sujit Das

ANANT PHADKE (*SHR*, II (3) p 151-2) in his critique of my article (*SHR*, II p 57-66) has chosen to employ rude words e g, "shame-faced defence of the interests of the doctors". Rude words may have their appropriate uses but, as I am inclined to believe, are never known to be good substitute for argument. To confess, my article has not been intended to be any sort of defence of anyone and I have not happened to feel any sort of shame in informing certain aspects of a certain section of the medical profession which is yet ill-understood. Reading Phadke's own article (*SHR*, II (3) p 198-50) on the same topic I find I can identify the difference between our basic approaches to the problem but before that let me clarify a few minor points raised by him.

Phadke takes me to task for my original title "Medical Profession in Health Care" which the working editors thoughtfully changed to "Doctors in Health Care" in order to, I presume, save me from ignominy. Phadke claims that the "medical profession being only doctors" is a popular but mistaken notion and it should include nurses, social health workers, etc. On the other hand, I had no intention to suddenly change a popular category of almost universal usage and if I did, I am sure, would have invited another, irrelevant debate. I do not feel much enthusiasm to emulate the purists' example of using the word 'doctor' for only medical doctors which is also a popular but thoroughly mistaken category. Phadke insists that general practitioners should be said to be involved in "petty commodity relations" and not "precapitalist mode of production" because the former is a "part of a capitalist social formation". Frankly, I do not understand the significance of the difference between the two. The production relation of the GP is neither capitalist nor post-capitalist and further, it is also a part of pre-capitalist social formation.

In his own article, Phadke deals with the subject from the traditional and over-worked idealistic approach to which I alluded in my article: "The profession has hardly been looked into as what it is, but often analysed on the basis of what it should be." That is why, Phadke wants to organise the doctors towards the end of fulfilling the tasks set by his own lofty ideal. He starts by uncritically superimposing the formulation of a particular western school of analysts on the Indian situation. This school categorises the highly skilled wage earners of advanced capitalist society as "new middle class" and Phadke adopts this formulation to place the Indian wage-earning doctors to that class and therefore attributes them similar contradictory role towards social revolution.

This he does without even a cursory glance to the Indian reality. By no stretch of imagination could the Indian society be labelled as an advanced capitalist society. The section of Indian wage-earning doctors is yet to be consolidated in a well-defined social layer. In my article, I have briefly narrated the social events which tend to show that this section of doctors is in the process of consolidating towards a distinct social layer, quite different from the other sections, under the influence of objective forces—particularly economic and political—despite individual tendencies to the contrary. Again, I find that Phadke's assignment of these doctor's role in the function of Capital (according to the same formula of new middle class of developed capitalism) is at variance with reality. I have not found these doctors, as a class, performing "the function of capital, of supervising, extracting work from the paramedics" in order to earn a part of the surplus value (from unidentified source). In fact, the current trend shows different picture. In Bihar, UP and West Bengal, this newly organising band of doctors has joined hand with the already unionised hospital workers in common struggle on common demands—particularly trade union—and democratic rights. Phadke 's estimate that these doctors earn a "comparatively high salary" also appears, devoid of clarification, to be another borrowed assumption. With whom has this comparison been made? With employees of the lower hierarchy, or with employees of the same hierarchy or with their work value/utitlity value/market price?

From this dubious promise, Phadke asks the left "to determine its strategy of organising this layer of doctors." He castigates the leadership of the doctors' organisations for organising them on a trade union platform; discounts trade unionism itself as unworthy because this will only consolidate their already earned privilege; laments that there is no "well thought out strategy in organising doctors; and calls for appealing towards a small section of enlightened doctors "on the basis of comprehensive revolutionary medical programme which asks doctors to throw away their privileges as elite doctors in return for the promise of decent, meaningful working life."

Well, there may not be nobler ideal and more humanitarian appeal to the heart and conscience. But such idealistic approaches have never helped. Trade unionism does not owe its origin and development to anyone's desires and wishes. Trade unionism develops from objective compulsions. Economism is one of the primary driving force behind trade unionism. Forgetting that we live in a country where even the mature organised working class itself is bogged down in economism, Phadke is so angry with doctors' trade unionism that he admonishes me for giving importance to the West Bengal doctors' movement in 1974 which did not raise any slogan in the peoples' interest. I do not understand why narration of fact or event should be taken as shame faced defence? Rather I believe it is of no use theorising without a look at facts and events. True to his disinclination to face facts, Phadke has missed an entire paragraph in my article where I narrated the subsequent events revealing how the doctor's organisation later came to understand the linkage between economic aspirations and egalitarian health care service and raised, an entirely new set of demands voicing people's interests.

Contrary to Phadke's assumption, I have not tried to determine doctor's role in social revolution—certainly not at this stage. I wanted to draw an eventful picture of a sec-

tion of the medical profession in the perspective of hard reality. Because I found that the observers almost always dealt with the medical profession from individual presumptions and pre-determined positions without bothering to sift empirical findings. Even the bitter critics of doctors have fallen prey, perhaps unwittingly, to the concept of noble profession and, for no coherent reason at all, expect the doctors to remain unaffected by the nuances of the commercial society and to conduct themselves as holy men. Hence, the exploitative practice of the doctors which is an utter contradiction to the ideal of noble profession, shocks them. Why should the noble doctors behave as other wage-earners do? Why should they indulge in trade unionism and economism as the common workers do? Why should they demand 8-hours duty as everyone does? Why shouldn't they, as noble ones, "throw away their privileges as elite doctors in return for promise of decent, scientific, meaningful working life", as the other commoners do not do? When these doctors do not oblige, Phadke goes searching for a "small critical mass of doctors" who may persuaded to raise a sufficiently strong clamour for "a revolutionary change" in the medical system.

I have little hope he will find one and even if he is fortunate to find them, his ideal may remain unrealised. One thing is certain. We cannot run a medical system without doctors—certainly not by a small critical mass of revolutionary doctors. Before jumping ahead to determine the role of doctors in social revolution, let us try to understand and determine their role in health care. What role do we envisage for the doctors in today's health care? What are they performing? What are the nature and cause of short-comings in role performance? What changes should we demand and strive for in the medical system and what will be the role of the doctors in such dynamic situation? In order to find answers to these questions we have to purge ourselves of the myth of noble profession, step out of our idealistic world of believe and turn a fresh look towards doctors as just a social layer with the relevant particularities. We have to collect real life data and analyse them. We have to know how the doctors practise medicine in the state hospitals, how they, as a class or interest group, interact with the recipients, non-doctor workers and the employer. In this context, discussion on professionalism, role expectation, role performance, as well as agitative movements become relevant.

When we do this, we may be able to understand and determine the service-doctors' role on the basis of their own conduct and not through any wishful thinking. Then only will we be in a position to determine their relationship with a people's health movement for a just health care service. The relationship—I quote Thompson again – "must always be embodied in real people and in a real context".

Without going into details, I may draw attention to the experience of USSR and China. There, in the post-revolutionary period, the state had to deal with the entire medical profession in reshaping health care service. Revolutionary exhortations were found to be inadequate. The instrument of incentive and disincentive was ultimately resorted to and it brought results. The problem has yet to be resolved. Professionalism, job satisfaction, economism, role expectation, role performance, private practice, technocratic scienticism etc, are still living problems.

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Light on 'Blind Spots'

u n jajoo

ANANT PHADKE in his review (RJH, June I: 1) of our book *When the Search Began* contends that: "It is not clear from their account as to why the response to this scheme was better than to the earlier one. No economic or political activity has been reported. Perhaps the support of the medical college including the doctor's monthly visit made this difference."

This and other such statements need some clarifications. The insurance scheme demanded Rs 3/person/year as contribution from 75 per cent of the village population and offered hospital services at 75 per cent subsidised cost (See Introduction). Though highly subsidised, hospital charges were beyond the reach of poor villagers. The Jwar Insurance Scheme provide free hospitalisation for all unexpected illnesses and thus provided a sense of security. It was essentially this modification which attracted people and not any economic or political activity.

Regarding Phadke's comments on cost analysis, a close look at the cost analysis will reveal the following:

Hospital indoor admission rate per year = One per 10 population
Government expenditure for 10 people 28×10 = Rs 280/year
Contribution from the people = Meets the cost of peripheral health infrastructure plus spares Rs 18.50
Therefore the amount which can be spared for hospitalised treatment per patient = Rs 280 plus Rs 18.50 Rs 298.50

With a proper referral established between the hospital and the specialised care hospital, I feel that with the amount available, and health insurance coverage for indoor admissions can be provided. It is futile to compare this cost-analysis with existing government PHC set-up where distribution of funds provides only 12 paise/person/year towards drug cost. What is important I believe is that the alternative strategy appears feasible.

Elsewhere Phadke comments that the increase in percentage coverage for health insurance from 46.5 in the first year to 71.5 per cent in the third year does not tally with the earlier claim. The data quoted earlier is from village Nagapur—the village where by trial and error health insurance scheme evolved over the years. The data on increase in coverage (on page 14) is pooled information from the new villages where health insurance scheme was introduced and then implemented once it was found feasible. The strategy of our entry

in village life was totally different.

As for the 'blind spots' the search continues. We began with what was possible in the given social structure, involving people to the maximum, without corrupting them with blind charity. The 'blind spots' can only be eliminated when really democratic health services evolve. What matters today is whether there are attempts towards the democratisation process.

We did try towards decentralisation, e g, village contribution is now collected by villages and is kept in the village as a village fund. Its utilisation is now decided by gram sabha, thereby controlling the village health workers performance. The attempts towards appropriate health education was the natural corallary but the extent to which attempts towards 'conscientisation' can breed 'health actions' is a question we have yet to answer.

It must be understood that for the goal of democratisation to be achieved the consumer should be participating. For people's participation to emerge, a felt need has to exist. The needs cannot be created. If need-based participation ensues, it has to be guided towards democratisation, the value which under-privileged section rarely visualises. It is here that the role of activist lies. The vision of democratisation is perceived by those individuals who can see beyond the immediate gains, i e, people who join the struggle through conscious committment.

As far as health work is concerned it is a moot question whether the consumers are motivated enough to actively participate. In case they are not, health work remains "for the people" and not "by the people." The experience narrated in the book describes our march towards "for the people." Though conscious of the goal "health by the people", we stumbled against the reality, that health is not a priority need of the people and hence we did not see community participation emerging.

One should not compare the strategy of work at organised sector like the Chattisgarh Mines Shramik Sangh and among unorganised rural agrarian population. Running a hospital by contributions from the beneficiaries is not new. What matters is how far the democratisation has been inculcated in health actions. It will be a nice idea if someone from Rajhara hospital shares his/her experiences of the democratisation process in health action, its feasibility and failures.

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ECT and Drug Therapy: Is There an Alternative?

AR

IT is true that medicalised attitude towards psychiatric problems is a misdirected one and we have to look at psychic disorders in a holistic way (SHR II: 4). But can we totally reject the use of drugs or even electro-convulsive therapy in psychiatric illnesses? The articles tend to suggest this by denouncing psychiatry *in toto*, without giving an adequate basis for such a total rejection.

To begin with, we must distinguish schizophernia (madness) from neuroses ("queer behaviour"). It has been well-established that there is some genetic factor involved in schizophrenia. Moreover, some schizophrenics become violent either to others or to themselves; many cannot take care of their bodily functions. It is almost impossible to keep such a person in one's house without treating him/her with powerful drugs or electuroconvulsive therapy (ECT). Like any other medical therapy, ECT may have its own risks and disadvantages. If the medical establishment is hiding these, or glorifying ETC, we must oppose it. We need a better mode of treatment then ECT. The scientific basis of how and why of ECT was not at all clear when it was started and is still not clear today. But this empirically established form of treatment is on the whole quite helpful in tiding over crises, and in reducing hospitalisation and in the absence of a better alternative, cannot be rejected. Are there any alternatives better methods of treatment available? Where is the proof? Similarly, powerful psychotropic drugs also reduce hospitalisation. These methods of treatment many-a-time convert the schizophrenic into a passive, dull individual. A few who do not require long-term treatment may become almost normal but many others loose vitality in their life. But again—is there a better alternative?

Schizophrenia is not simply "deviant" behaviour. It is quite troublesome and often may be dangerous to others. If it is considered as a revolt against the society, how should society react to it? In a social political revolt, there are certain definite demands. But the schizophrenic does not have any such demands.

What is precisely wrong in conventional psychiatry is the medicalised conception of schizophrenia. ECT and drugs are not looked upon as temporary resorts in extreme conditions, but as the solution. Though there are genetic factors involved, stressful life situations, continued tensions and humiliations are often responsible for converting a genetic potential into the reality of madness. Instead of being sympathetic to the patients for the sorry state to which the society has brought them, the victims then are blamed, castigated and the role played by social-cultural conditions in creating this illness is forgotten. Unlike neuroses, a change in the family or work-environment may not bring the schizophrenic back to complete normalcy. In this regard, one is tempted to compare schizophrenia with byssinosis (a bronchitis-like condition found in cotton-mill-workers which is caused by continuous exposure to cotton-dust; once developed, it cannot be cured). Like byssinosis and many cancers, schizophrenia can be prevented. But once the damage is done, it can rarely be reversed. The real solution to schizophrenia is to create a society which would not create such stressful situations which foster schizophrenia. Even then, there may be a few people going mad, but to be sure, the incidence can be brought down considerably. But in the present circumstances, all that the medical people can do is to be sympathetic to the patient, to use drugs, and so on when essential and identify the family and society as an important cause of this malady.

In neuroses, the family and the society at large are completely responsible for a person's neurosis; there being no genetic factors involved. Early detection of "strange behaviour" and identifying the cause in the immediate interpersonal, social surrounding may help a lot. If the situation around such a person continues in the same fashion, the person may end up with serve neurosis and then the person may never revert back to complete normalcy; years of illness-creating-environment create a change which cannot be easily reverted. Drugs can only be useful to tide over a crisis. But by no means are they the real solutions.

In the absence of a holistic view of mental health and illness, and also due to vested professional or business interests of psychiatrists, and the drug-companies, psychiatry has been overused, abused. This fits well into a society where there is a culture of scienticism, compartmentalism. This overuse, misuse of psychiatry has to be opposed. We need to create a countertendency in addition, which identifies concretely pathogenic interpersonal and social practices, their economic-political basis. Such a countertendency has also to evolve and practice an alternative, healthy culture to demonstrate an alternative. The seed for socialist, healthy culture has to be sown today! But I doubt whether ECT or drug therapy for those who are already ill can be totally rejected.

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my sin....analgin

those were the last dying gasps,
(or so it seemed then),
that were kept 'alive' with galloping agony,
that pushed my life into hopeless despair

fever juxtaposed with spasmodic chills
and that soar throat that quenched my voice
into oblivion,
was signal enough
to let loose
tiny, horrendous microbes,
in tens of thousands, millions and billions,
to pounce on my flesh,
in an effort to strip me to my skeleton.

the healing messiahs,
gathered around me
(in a state of helplessness)
pumped desparately blood into me,
to replenish the granulocytes,
that had vanished from my blood,
thanks to the pain-killer,
which i was prescribed.

i survived somehow.
they said i was lucky.
"it's a miracle,
50 percent don't see through."

"pain-killer ? driving me to the height of agony ?
plunging me into misery ? dragging me to death ?
why make such a monster ? "i cried
with a voice that had barely returned.
and the messiahs said,
there were 'profits' in making this monster

"profits"?" i was puzzled.
"profits" they said,
"for companies which manufacture it,"
"profits for the governments which allow it,"
"profits for the messiahs who prescribe it,"

"but what of me" i said,
"i was pushed into the doors of death."
" oh !" they said,
"you are just one that gets into such a mess,
after every hundred thousand."

i wished i was amongst
those 50 percent who did not see through,
for this callousness
was more agonising than the disease.

"but what was my crime,...what was my sin."
they laughed cynically... "you ingested analgin."

anil pilgaokar

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State in Medical Care

The Irreversible Welfare State

Towards a Left Critique of New Drug Policy

Medical Officers: The 'New Middle Class'?

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State in Health Care

THE Indian tradition of state intervention in health care is quite old. During the reign of Asoka in 3rd century BC, besides other social welfare measures, the state established medical centres for man and animals, undertook planting of medicinal herbs and trees, and supply of potable water through wells along the highways. Similar medical centres were claimed to have been established in the neighbouring countries at Asoka's instance (Thapar, 1973). In modern times, a major role of the state in health care service has universally been recognised and accepted. Politics of each country determines the nature of intervention and quantum of contribution by the state. For instance, in the socialist countries the state has assumed the entire responsibility; UK operates the unique National Health Service; in Canada and New Zealand, the state bears almost the entire expenditure; in many European countries the allocation by the state is ever increasing; and in the third world a similar feature is discernible. In India pressure on the government to spend more on health care is quite strong. The state's role varies ranging from the direct and absolute state administration to indirect and partial intervention.

In India, the situation is somewhat peculiar. The state has undertaken the entire responsibility of health care of the personnel of the army, parliament and the railways; partial responsibility of the other employees of the government and public undertakings. and a dubious responsibility of the mass of people. Historically, modern health service owes its beginning to the British presence. Although the first legislation in this respect, the Quarantine Act, had been introduced in 1825, real concern for a state operated health service appeared after the 'Indian Mutiny' or 1857 in the context of the over-riding political necessity to safeguard the health of the troops and the European civilians. All health intervention were geared to achieve this objective. However, endemic and often epidemic prevalence of communicable diseases as well as political compulsions put sustained pressure upon and eventually forced the government to do something for the native civil population which relied largely on traditional indigenous system (see SHR, Vol II, No 3). Montague-Chelmsford Constitutional Reforms of 1919 and later the Government of India Act, 1935 decentralised the responsibilities which devolved almost entirely on the provincial and local authorities. This constitutional framework and the policy outlined in the report of the Health Survey and Development Committee (1946) had been the basis of policy guidelines for the national governments.

Article 47 of the Indian Constitution clearly avows, under the Directive Principles of state Policy, the state's responsibility to raise, "the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties". Here, the 'state' actually means the seat of the Union Government. But the VII Schedule allocates almost all responsibilities to the provincial governments, e g, public health, sanitation, hospitals and dispensaries, drugs, family planning and population control, medical education, medical profession, prevention of the extension of communicable diseases from one state to another and vital statistics have been placed under the Concurrent list, while the Union list mentions only Port Quarantine, and determination of standard in 'scientific and technical institutions' meaning perhaps also medical institutions. In actual practice, however, the Union Government deals with international health relations, promotion and conduction of medical research, regulation of production, quality control and trade of drugs, regulation of standard of medical education, vital statistics, and medical care of employees. National disease control/eradication programmes, family planning, MCH, drinking water supply, etc, are financed by the Union Government and operated through provincial health organisations. Moreover, there are several other spheres where the Union Government makes some contributions, e g, medical education, health education, health information, dissemination, drug production, development and promotion of other systems of medicine, rehabilitative medicine, paramedical training, etc. Provincial Governments, on the other hand, not only enjoy almost absolute autonomy in health care operations both at the policy and implementation levels, but are supposed to exclusively provide for medical care and public health services. Juridically therefore, it may be argued that the Union Government contirbutes more than its share in health care services.

But then one fundamental aspect is missing in such analysis. Health care includes, as is now widely known, adequate nutrition, safe water and sanitation, healthy environment, education, employment, etc. Solution of these problems is necessarily dependant on the economic system and political programme, i e, the conduct of the Union Government. It may therefore be held that the basic determinants of health necessary for the protection, maintenance and improvement of health of the people are to be provided by the Union Government and the Provincial Governments are responsible for the provision of universal medical care which is no less an important determinant, if not the most.

Till now the health of a community of people or that of country is measured and appraised by certain parameters, e g, infant mortality rate, death rate, expectation of life at birth, sanitation, per capita consumption of food and safe water, etc. In the context of such parameters, India has made steady progress in the post-independence period. But in the context of desirable goals and international standards the Union Government admitted that such progress brought little benefit to the Indian masses and the health situation of the country was still precarious and alarming (GOI 1982).

In the background of this reality the Government of India endorsed the WHO target of "Health For All By The Year 2000 AD" which called for the following intermediate goals:

1985—Providing right king of food for all;

1986—Providing essential drugs for all;

1990—(a) providing adequate basic sanitation for all;

(b) providing adequate supply of drinking water for all;

(c) immunisation of children against six common

diseases, *viz*, measles, whooping cough, tetanus, diphtheria, polio and TB.

Needless to say, the targets for 1985 and 1986 remain unrealised. But the point is—'food for all' has already been a declared goal of the Indian State since the adoption of the constitution. A period of three and half decades has made it obvious that the Indian State has neither the means nor the political will to achieve that goal. Hence, the endorsement of the targets set up by the WHO appears to be either a mere formality or an exercise in duplicity.

Turning to the matter of medical intervention which is dominated almost exclusively by the provincial government, we need to face certain facts:

(1) State medicare is practically free to all without discrimination from millionaire to pauper; though in respect of finance and administration there are provincial boundaries services are available to all transcending such boundaries; those who enjoy guaranteed medicare through certain agencies are also welcome to the state's free medicare; and even foreigners are not put to any restraint in obtaining free medicare from the state institutions.

(2) There exists a strong and evergrowing private sector of medicare consisting of hospitals, nursing homes, clinics, diagnostic set-ups and dispensaries, which constitute ¾th of the medicare field.

(3) Overall superiority in specialisation, sophistication, modernisation and excellence is still attributed to the state sector for various reasons.

(4) State medicare institutions are disproportionately concentrated in the urban areas, and the rural institutions, meant ostensibly for comprehensive health care, have mostly turned into curative agencies.

Conceptually therefore, state medicare is delivered more on the principle of charity and not obligation or welfare. It is not then surprising that the resulting situation is disorganisation, deterioration in quality, unscientific practice, corruption, chaos and frequent break-down of law and order. In the ensuing 'free for all' for the cost-free medicare, the weaker sections are deprived of health care.

Medicare is provided to the industrial workers through the unique Employees State Insurance (Medical Benefit) Scheme, financed jointly by the workers and the employers, regulated by the joint body of employees, employers, Union and Provincial Governments and medical profession, and operated by the provincial governments. Services are rendered for sickness, maternity and employment injury. This scheme could be viewed as a forerunner of national health service but there is a big difference in the matter of financing compared to the similar schemes in other countries.

Financing of health services in India presents an interesting story. While the share of the allocation on health care has steadily been reduced in the Union budget in the successive 5-Year Plans, that on family planning increased with a sharp upward jump in the 4th Plan. In terms of GNP it has not exceeded 0.5 per cent compared to 5-10 per cent in several developed countries—(GOI, 1975, 78, 79, 80-81). In terms of the state's share in the total health expenditure of the country, India (24 per cent) is way behind not only the developed countries but even Sri Lanka (50 per cent) (Roemer, 1984).

Steady increase of state intervention in health care is a distinct feature of capitalist society and it is explained in various ways. It is argued that state health care expenditure is a form of social wage to the labouring class and it serves the need of capital for the steady flow and reproduction of labour power and to maintain/increase productivity. This view is also discounted by the argument that historically the technological changes or a relative scarcity of labour have been found to be more effective than higher rates of medical expenditure in obtaining increased productivity (Doyal an Pennel, 1979). While there is positive evidence that public health legislation of the 1840s in UK resulted in improving the productivity of labour, in India, fluctuating state expenditure on health does not appear to bear any corresponding relationship with availability of labour in the market. There is broad agreement among the marxist commentators that the ruling class meets the social needs of capital through the state invervention in health care or for that matter through all social welfare measures. It provides a benevolent image for the state maintaining support for the existing system, and developing the dependency on the state. It legitimises bourgeois ideological underpinnings. On the other hand, it is asserted that increasing state intervention is the product of the social demands of labour, achieved through class struggle. Fluctuation of the magnitude of intervention generally corresponds with the differing intensity of class struggle. Then again it is argued that there is actually no contradiction between the two explanations and there is no single-factor explanation of social policy. Social demands of labour seek increase in social wages and public ownership of means of production. Social needs of capital are served by employment absorption of surplus population and provision of social services pre-empting conflict and unrest from unemployment, uncertainty and physical distress. The nature and number of the combination of factors depend on the historical situation, level of development of productive forces and relations of production and the level of class struggle. "There is no clear-cut dichotomy between the social needs of capital and social demands of labour. Any given policy can serve both. Indeed, social policies that serve the interests of the working class can be subsequently adapted to benefit the interests of the dominant class... Indeed history shows that concessions won by labour in the class struggle become, in the absence of further struggle, modified to serve the interests of the capitalist class" (Navarro, 1976).

What role of the state do we then envisage for an egalitarian health system? The distorted nature of medicine under capitalism and the discriminatory delivery of health care have produced diverse reactions. Total state control or nationalised health care, integrated health care meaning integration of other relevent state services with health service, decentralised health care calling for peoples participation and sharing of power in planning and administration, debureaucratisation, i e, replacement of generalists' control by professionals, people's health in people's hands signifying vague assertion of self care and self-contained community management—are some of the prescriptions. The reactions seem to ignore the determinist nature of state intervention. With the growing magnitude of socialisation of the production process, the state inevitably assumes more and more

(Continued on page 108)

Political Economy of State Health Financing

ravi duggal

In a capitalist state the government is a functionary of capitalism—its role is to protect and strengthen it. Thus the state's behaviour even with regard to the health sector programmes, is a function of private capital.

The health sector started with a very low priority and has gradually gained an increased share of the state's expenditure, the growth rate of health and family planning expenditures has been much greater than both the growth of government expenditure and the gross domestic product. But this does not reflect an improvement in health care services provided by the state. Why this is so and what role state financing of health care has played is examined in this article with specific reference to two states, Gujarat and Maharashtra.

THE health sector is popularly perceived as being part of the social services sector. The corollary to this being that it automatically becomes largely a responsibility of the state. This perception is common even among the most advanced capitalist states.

Health and education (besides unemployment insurance in a few countries) are the 'classical' sectors within the umbrella of state welfare. Over the years, all over the world, these two sectors have increasingly been supported through public finance for various reasons. The most important being the predominance of the view that they are a social service and therefore, not in the direct interest of private capital. Nevertheless, they being an important social need had to be met, and therefore public finance became the provider increasingly.

The historical consequence of this development has been a greater role for the state in meeting the needs of the people. Since state finances come largely from taxes the household and corporate sectors have gradually begun to feel the brunt of letting the state take care of the social sector. Given the nature of the capitalist state there comes a point beyond which taxing private capital becomes a threat to capitalism itself. Thus emerges a "fiscal crisis of the state" and there is talk of cuts in welfare and social expenditures. The pressures of capitalism in its pursuit of surplus appropriation is responsible for this.

Advanced capitalism, especially monopoly capital, and the state have a love-hate relationship. Love, because the survival of capitalism is dependent on state protection and support, and hate because increased state expenditures mean enhanced taxes and public debt that may terminate in a fiscal crisis, or worse a social one.

Of late this realisation has hit capitalism, which sees the dangers inherent in an increased burden of state welfarism. The result is increased "corporate welfare". This is happening in the USA in a large way and the health sector is the best illustration. Expansion of private health care (especially corporate) in the last three or four years in the USA has been phenomenal. What is more is that it has also been realised that the social sector, especially health, can be a highly profitable one. This is largely facilitated by modern technological advances in health care. For instance in the USA between 1980 and 1984 corporate revenues in health care grew from $ 25 billion to $ 118 billion, along with increased monopolisation through mergers and takeovers (in spite of anti-trust suits). And in the same period, of the 37 largest health and welfare corporations only two lost money, whereas 13 more than doubled their revenues and 11 more than quadrupled their revenues (Stoesz, 1986).

This trend is true for most advanced capitalist countries and is fast emerging in backward capitalist countries too. In the last two years in India over Rs 200 crore have been spent by the corporate sector in setting up 60 diagnostic centres (CT scan etc.) all over the country, of which 46 were set up by the United Group alone (Business India, Dec 29, 1986).

This, however, does not mean that the state health care sector is on the decline. Historically the state health sector as well as other state welfare and development programmes have served the needs of private capital (see Galper, 1975). We will return to this later.

The state financed health care sector in India is 'patronised' by only about one-third of the country's population, of this roughly 80 per cent being urban. That is two-thirds of India's population utilise private services for health care; and the state's health services are concentrated disproportionately in urban/industrial areas. It may also be noted that municipal health services, railway, defence and mining health services, as also those services provided by public sector undertakings are not accounted for under 'state health expenditure'.

Health is a state (provincial) subject and therefore the responsibility of providing health care vests with the concerned state. However, the union government does make a substantial contribution to the states through grants and centrally sponsored health programmes. Besides, policy making and planning for the health sector has largely been determined by the centre.

The state health sector in India incorporates three components (a) Medical Services including CGHS and ESIS, (b) Public health (including water supply and sanitation) and (c) Family Planning (including MCH). Family Planning is almost entirely a centrally funded programme (it falls under the concurrent list). In this paper we will look at the health sector as including only the first two components, treating family planning independently.

The major sources of data for state spending on health care are (a) The Combined Finance and Revenue Accounts (CFRA) of the Union and State governments compiled by the Comptroller and Auditor General of India, (b) Summarised Accounts in the Indian

Economic Statistics: Public Finance, compiled by the Department of Economic Affairs of the Ministry of Finance, and (c) The Performance Budgets of health ministries of the respective states.

In the CFRA data is available state-wise but the disaggregation is of little use because the categories used are administrative ones like 'establishment', 'direction', 'grants' etc. However, the state's Performance Budgets give programmewise expenditures but these documents are not easily available; and if available are too voluminous for a time-series analysis. Therefore, in this paper national aggregate figures will be used for an overall analysis, and a case study of programme based analysis will be done for Maharashtra and Gujarat states.

State Financing of Health in India

The Indian constitution in its 'Directive Principles of State Policy' has vested the state with responsibility for providing free health care services to all citizens.

TABLE 1 A: HEALTH EXPENDITURE, GDP AND GOVERNMENT EXPENDITURE IN INDIA BY PLAN PERIOD
(Rs Crores)

Plan Period		State Health Expenditure (a)			(b)	(c)	(c)	(c)	(c)
		Medical and Public Health*	Family Planning	Total Health	Per Cent Plan Expenditure	Private Medical Expenditure	Total Govt. Expenditure	GDP at Current Market Prices	Population in crores (plan period average)
	1	2	3	4	5	6	7	8	9
	5 years	197	0.15	197.15	38.7	NA	8915	50175	38
I	annual average	39.40	0.03	39.4			1783	10035	
	5 years	420.8	2.2	423	51.3	NA	13520	66235	42
II	annual average	84.16	0.44	84.6			2704	13247	
		(113.6)	(1366.67)	(114.55)			(51.65)	(32.0)	
	5 Years	939.1	24.9	964	37.1	2227	23080	99890	46
III	annual average	187.82	4.98	192.8		445.4	4616	19978	
		(123.1)	(1031.81)	(127.89)			(70.7)	(50.8)	
	3 years	723	70.4	793.4	39.5	2237	21213	155390	51
Plan Holiday	annual average	241	23.47	264.5		745.7	7071	31078	
		(28.31)	(371.28)	37.18		(67.4)	(53.18)	(55.56)	
	5 years	1954	284.5	2238.5	47.9	5629	53255	227395	55
IV	annual average	390.8	56.9	447.7		1125.8	10651	45479	
		(62.15)	(142.43)	(69.26)		(50.97)	(50.6)	(46.34)	
	5 years	4201.1	538.2	4739.3	49.5	6578	103305	411810	62
V	annual average	840.22	107.64	947.9		1315.6	20661	82362	
		(115)	(89.17)	(111.7)		(16.85)	(93.98)	(81.1)	
1979-80	annual	1320.9	121.8	1442.7	50.5	1567	31670	107444	66
	5 years	11152.4	1626.2	12778.6	52.8	11479***	262150	846670	71
VI**	annual average	2230.48	325.24	2555.7		2295.8	52430	169334	
		(165.46)	(202.15)	(169.6)		(74.5)	(153.7)	(105.6)	

(Figures in parenthesis are average percentage growth rates over the previous period)
* Includes water supply and sanitation, CGHS, ESIS, ICMR, Medical Education and Research.
** Last two years of the VIth plan are budget estimates/allocations.
*** 4 years as reported in 'National Accounts' and fifth year estimated by the author at Rs 2930 crores.

TABLE 1 B: RATIOS

Per Capita Per Annum Health Expenditure (Rupees)		Ratio FP: Medical and Public Health (Per Cent)	Ratio Pvt Medical State Medical and: Public Health (Col. 2) (Per Cent)	Per Cent State Health (Col 4) of Total Govt. Expenditure	Per Cent State Health (Col. 4) of GDP
State (Col. 4)	Private				
10		11	12	13	14
1.04	—	0.08	—	2.2	0.39
2.01	—	0.52	—	3.13	0.64
4.20	9.68	2.65	237.14	4.18	0.96
5.20	14.62	9.74	309.40	3.74	0.85
8.14	20.47	14.56	288.07	4.20	0.98
15.29	21.22	12.81	156.58	4.59	1.15
21.86	23.74	9.22	118.63	4.55	1.34
36.0	32.33	14.58	102.92	4.87	1.51

Table 'A' Complied from: a) Comptroller and Auditor General of India: *Combined Finance and Revenue Accounts*, GOI, years 1951-52 through 1981-82 and Department of Economic Affairs: *Indian Economic Statistics*: Public Finance, Ministry of Finance, GOI, 1982.
b) CBHI: *Health Statistics in India* 1984, Ministry of Health, GOI, 1985.
c) CSO. *National Accounts Statistics*, Ministry of Planning, GOI, Years 1965 through 1986.

Where does the state stand on this issue?

Analysis of finances of the state reveals that the health sector started with a very low priority and has gradually gained an increased share of the state's expenditure, stabilising between four and five per cent of the government's total expenditure. Similarly state expenditure on health care has shown marginal increases over the years with regard to proportion of the Gross Domestic Product. Table 1 'A' and 'B' presents data in this regard by various plan periods.

The most interesting finding that emerges from this data is that the growth rate of both health and family planning expenditures have been much greater than both the growth of government expenditure and the gross domestic product. Further, as per the estimates of 'National Accounts' we see that the gap between state health expenditure and private medical expenditure is narrowing. These facts are indicative of high investment in the state health sector, but, unfortunately, the results of health programmes do not corroborate this. Why is this so?

Firstly, the level of investment and expenditure in the state health sector, though experiencing a growth rate higher than total government expenditure, is at a fairly low level. For the year 1984-85 the allocated expenditure for the entire state health sector was Rs 3,287.8 crore, working out to a meagre Rs 43.84 per capita per annum (1.54 per cent GDP and 5 per cent of government expenditure). This includes expenditure on medical services and national disease programmes, public health and PHC, water supply and sanitation, CGHS, ESIS, MCH, family planning, medical education and research, health bureaucracy, construction of new health centres and hospitals. At today's market prices providing the above services adequately to the entire population free of cost requires much more expenditure than is earmarked presently.

Secondly, a large proportion of health expenditure in the III, V and VI Plan periods, when the growth rate of health expenditure had been the highest, went into infrastructure development i e, water supply schemes and construction of health centres. In fac more than one-half of the medical and public health expenditure since the III Plan period is spent on water supply and sanitation. The plan holiday period and IV Plan, when capital expenditure was very little, show low growth rate in health expenditure. And, in spite of this the health infrastructure remains poor. Even today the government is nowhere near the level of infrastructure and facilities recommended by the Bhore Committee in 1946.

Thirdly, between 70 and 80 per cent of the investment and expenditure in the state health sector goes to the 30 per cent population in urban areas. This mismatch (of rural-urban disparity) by the state is in spite of the fact that urban areas also have access to other public and quasi-public health care facilities such as municipal and other local body hospitals and dispensaries, municipal protected water supply and sanitation, municipal funded medical education, ESIS and CGHS for industrial and government workers and so on. For instance in 1983 in Maharashtra, of the total 478 state-owned (central and state government) hospitals and dispensaries 432 (90 per cent) were in urban areas and of all the state owned beds 97 per cent were in urban areas. And of all the beds in Maharashtra (public and private) 30 per cent were in Bombay city alone (SBHI, 1983).

Fourthly, leaving aside the preventive and promotive services, the curative services provided by the state, especially in the rural areas, are grossly inadequate. That curative services are the priority demand of the people vis-a-vis health is evident from various studies that have shown that even in rural areas the private medical practitioner provides services for between two-thirds and three-fourths of illness episodes in the population.

Following from the above, the private medical sector becomes a strong adversary to the state sector because the former is totally curative-oriented, because it is 'efficient' and non-bureaucratic, because it is 'effective' and most importantly because it is easily accessible

TABLE 2: HEALTH FACILITIES IN INDIA
(selected years)

Year	No of Hospitals	Population Per Hospital (In lakhs)	No of PHCs	Rural Population Per PHC (In lakhs)	No of Beds	Population Per Bed	Percent of Rural Beds	Percent of Hospitals Owned by the State	Percent of Beds Owned by the State	No of Dispensaries	Percent of Dispensaries Owned by the State
1951	2694	1.3	—	—	117000	3199	NA	NA	NA	6515	NA
1956	3307	1.2	725	4.4	157000	2554	25.0	NA	NA	7100	NA
1961	3094	1.4	2565	1.4	230000	1930	NA	NA	NA	9405	NA
1966	4147	1.2	4631	0.8	304000	1628	NA	NA	NA	10236	NA
1971	3976	1.4	5112	0.8	331000	1673	NA	NA	NA	10897	NA
1974	4014	1.5	5283	0.8	355461	1668	13.7	62.6 (16.0)	69.5 (16.2)	10200	NA
1982	6805	1	5739	0.9	504538	1405	17.2	50.8 (44.3)	68.1 (26.7)	16754	60.9 (14.1)
1984	7181	1	7210	0.8	536370	1378	17.43	49.3 (45.3)	68.1 (26.7)	21780	51.8 (29.6)

(Figures in brackets are percentages in private sector; the remainder is facilities owned by local bodies)
Compiled from: CBHI: Health Statistics in India/Pocket Book of Health Statistics, Ministry of Health, GOI, respective years

when needed.

And finally, the credibility of the state's rural health services is very low. This is largely due to its obsession with family planning targets. Over 60 per cent of the PHC staff's time is spent on family planning work.

Thus, the high growth rate of health expenditure is a deceptive feature, because disaggregated it reveals the unhealthy direction of growth. In the following paragraphs the data in each column in Table I is analysed in detail.

Medical and Public Health

In the health sector the Britishers did not leave any significant legacy of an infrastructure. Therefore, a beginning from scratch had to be made after Independence. What was left by the British was an exhaustive Plan called the Bhore Committee Report, a small network of civil hospitals, a few medical colleges in premier cities and a network of military and railway hospitals. No rural health infrastructure of any significance existed at the time of Independence. The expenditure by the British state was meagre (see Appendix 1).

However, even after Independence the Indian state did not deem the health sector to be a priority. In the First Plan period the state spent an average of Rs 39.40 crore per year which was only 2.2 per cent of total government expenditure and only 0.39 per cent of the GDP; much less than what the British government had been spending. At the end of the First Plan, besides 725 PHCs there were 3307 hospitals, and 7100 dispensaries in India, the majority of hospitals belonging to the state (breakup of ownership for this period is not available).

In the Second Plan period the expenditure on medical and public health more than doubled and this pattern continued in each subsequent plan, except during the 'plan holiday' and the IV Plan when growth rate of health expenditure showed a drastic decline. Health facilities too increased but they remained heavily skewed in favour of urban areas. With the launching of the Minimum Needs Program, from the IV Plan onwards rural health infrastructure began to receive some significant attention.

Table 2 lists health care facilities in India. It is evident from this table that the health infrastructure is very poor even today, especially so in rural areas. The best indicator of health care facilities is the number of hospital beds available to the population. The earliest year for which this break-up is available is 1956 when 25 per cent of all hospital beds (government, local body and private) were located in rural areas that had 80 per cent of the country's population. This declined to 13.7 per cent in 1974, clearly indicating that the rural areas had been neglected grossly where investment in the health sector was concerned. Even where PHCs are concerned it is clear that the number of PHCs added over the years has not been adequate for the rural population as between 1966 and 1984 the PHC: Population ratio has remained constant at one PHC

TABLE 3: MEDICAL EXPENDITURE BY SELECTED CORPORATE AGENCIES

Organisation	Per Employee Family Annual Expenditure (Rs)	Reference Year
TELCO (b)	1106	1982-83
National Rayon (b)	860	1982-83
Ashok Leyland (b)	717	1982-83
BHEL (a)	830.47	1980-81
Railways (a)	310.45	1980-81
SAIL (a)	677.93	1980-81
Air India (a)	725.00	1980-81
CGHS (c)	271.90	1980-81
ESIC (c)	80.99	1979-80
Bombay Municipal Corporation (d)	70.08	1983-84

Source: a Lok Sabha Estimates Committe, 22nd report, Ministry of Health, GOI, 1982.
b ORG, *Health Financing in India*, ORG, Baroda, 1985.
c CBHI, *Health Statistics in India*, Ministry of Health, GOI, 1983.
d BMC, *Performance Budget Estimates* 1985-86, BMC, Bombay, 1985.

TABLE 4: PLAN OUTLAYS IN THE HEALTH SECTOR—INDIA

(Rs crores)

Health Programme	Plan Period (Plan Holiday Period Excluded)						
	I	II	III	IV	V	VI	VII
1. Control of communicable diseases	23.10	64.0	70.5	127.01	168.61	524.0	1012.67
2. Primary Health Centres, Hospitals & Dispensaries	25.0	36.0	61.7	164.78	155.62		
3. Education, Training and Research	21.6	36.0	56.3	98.22	111.76	*720.1	*1283.87
4. Minimum Needs Programme (Health)	—	—	—	—	29.47	576.96	1096.35
5. Indigenous Systems of Medicine	0.70	4.0	9.8	15.83	27.72	*	*
6. Family Planning	0.40	3.0	27.0	315.00	516.0	1010.0	3296.26
7. Water Supply & Sanitation	49.0	76.0	105.3	407.00	1022.0	3922.02	6522.47
8. Other Schemes	20.2	6.0	11.2	27.69	40.81	*	*

* Included in Health Programme 2 and 3.

Sources: 1. CBHI: Pocket Book of Health Statistics of India, Ministry of Health, GOI, 1976.
2. Planning Commission, Sixth Five Year Plan 1980-85, GOI, 1980.
3. Planning Commission, Seventh Five Year Plan 1985-90, GOI, 1985.

for 80,000 population. This stability (sic) is also true of the hospital/population ratio.

However, the point that emerges most significantly from Table 2 is the fact that since mid-seventies there has been a sharp rise in the proportion of health facilities in the private sector as compared to the state sector. Thus, in 1974 the private sector accounted for only 16 per cent of hospitals in the country but within a decade the private sector's share of hospitals rose 2.83 times to 45.3 per cent, and that of the state sector declined from 62.6 per cent in 1974 to 49.3 per cent in 1984. The change in the proportion of hospital beds in either sector was not as sharp.

Therefore, it becomes very clear that both the "high" growth rate of the state health sector and the narrowing gap between state and private health sector expenditures is only an illusion created by aggregated data.

Family Planning

Expenditure on family planning (now including MCH, CHG scheme and the EPI program) is almost entirely financed by the central government through 'plan' funds. Allocations to FP have increased at a phenomenal rate in each plan period. Between the First and the Sixth Plan periods the *allocation* increased from Rs 0.65 crore to Rs 1010 crore i.e. 1554 times, and more astoundingly FP *expenditure* increased from Rs 0.15 crore to Rs 1626 crore or 10840 times, whereas total plan expenditures in the same period increased only 50-fold and health expenditure (plan and non-plan) only 57 times. Computing this growth rate may sound unfair because FP started with a very insignificant allocation in the First Plan period but the fact remains that the growth of family planning expenditure has been at the cost of expenditure on health care services. In the VII plan for the first time plan allocations (revised) to FP are higher than that for health.

Further, in each plan period we see a decline in growth rate of family planning expenditure and the growth has been the lowest, ironically, in the Emergency period (Vth Plan). Therefore, this computation too is unfair. This is the illusion that aggregate statistics project!.

Notwithstanding this, the growth of family planning expenditure remains higher than that of health expenditure. And further, it may be noted that at the implementation level a large proportion of resources and personnel-time allocated to health is used for family planning work because the latter ranks as priority number one in state policy making. (For details on Family Planning financing see Duggal, 1986).

Private Medical Expenditure

It has already been pointed out earlier that over two-

TABLE 5: DISAGGREGATED STATE HEALTH EXPENDITURE FOR MAHARASHTRA AND GUJARAT—VI PLAN PERIOD
(Rs million)

Programme	Maharashtra			Gujarat		
	1980-85	Annual Average	Per cent Plan	1980-85	Annual Average	Per Cent Plan
1. Direction and Administration	870 (5.48)	174.0	9.1	70.14 (1.1)	14.03	16
2. Medical Relief	1772.8 (11.16)	354.56	7.5	1216.30 (19.17)	243.26	7
3. Training	9.1 (0.06)	1.82	0	34.38 (0.54)	6.87	34
4. Medical Education	661.1 (4.16)	132.22	32.2	262.42 (4.13)	52.48	12
5. Control of Common Diseases	1302.9 (8.2)	260.58	61.8	746.03 (11.76)	149.2	35
6. MNP	602.8 (3.8)	120.56	93.1	457.93 (7.22)	91.58	13
7. ISM	241.6 (1.52)	48.32	3.5	170.32 (2.68)	34.06	9
8. ESIS	1203.2 (7.58)	240.64	2.8	558.59 (8.81)	111.72	0.67
9. Other Expenditure/Services/ Loans	248.1 (1.56)	49.62	6.1	138.74 (2.18)	27.75	24
10. Nutrition Programme	NA	NA	NA	324.86 (5.12)	64.97	20
11. School Health	NA	NA	NA	2.05 (0.03)	0.41	87
12. Family Planning	1435.4 (9.04)	287.08	99.5	927.81 (14.62)	185.56	NA
13. Water Supply & Sewerage	7536* (47.45)	1507.2	50*	1434.3 (22.6)	286.86	67.3
Total	15883 (100)	3176.6		6343.87 (100)	1268.77	

(Figures in brackets are percentages to total)

Source: ORG, Health Financing in India, ORG, Baroda, 1985.

* Plan expenditure was Rs 3768 million. Since the non-plan figure was not available the author has estimated it to be half each.

thirds of health care services utilisation is in the private sector and the remaining is divided between the state sector and other public and quasi-public institutions.

In Table 1 we see that the growth of private medical expenditure has been much slower than the state health sector. As a result the gap between the two has narrowed down to almost unity during the VI plan period. This is contradictory to two facts indicated in earlier sections. Firstly, that between two-thirds and three-fourths of health care utilisation is in the private sector. And second, that the growth rate of the private health sector after mid-seventies has been very high (see Table 2).

Therefore, this data on private medical expenditure computed by the CSO in 'National Accounts Statistics' is highly questionable. Studies carried out by the Foundation for Research in Community Health indicates much higher estimates of private medical expenditure. For the year 1983-84 it has been estimated that the total health expenditure in India was Rs 16,386.41 crore or 8.33 per cent of the GDP. Out of this only 11.7 per cent was spent by the state, 60.4 per cent was spent by private households, 22.7 per cent by the corporate sector (private and public) for its employees and 5.2 per cent by local bodies. Also, with regard to private household health expenditure a gross rural-urban disparity is seen—in rural areas an astonishing 94 per cent of health expenditure was borne privately by households whereas in urban areas this burden was only 35 per cent of their health expenditure (*FRCH*, 1981). This is mainly because urban areas have access to better state and other public (such as municipal) health care facilities as also to employer or insurance sponsored health care programmes. Expenditure of selected agencies is presented in Table 3. *Ratios*: A few selected ratios have been computed from Table I and are presented in Table I 'B'. The data in this Table speaks for itself and it has also been referred to in earlier sections. Therefore, we leave it at that.

State Health Expenditure on Health Programmes

As mentioned earlier disaggregated data for state health expenditure for the nation is not available on a programme-wise basis, except for plan expenditure. Therefore, we will look at the state (provincial) level to get a detailed breakdown.

Where plan expenditure is concerned consolidated data is available for eight categories. Table 4 presents this data. It is clear from this table that water supply and sanitation leads as expenditure number one grossing between 30 per cent and 50 per cent of the health sector Plan—it has grown in each plan period taking a larger proportion each time.

Family planning on the other hand started by being the lowest funded programme in the first plan (0.3 per cent) to gaining second position (27.56 per cent) after water supply, by the V Five Year Plan. As a consequence all the other programmes have suffered and have had a smaller share in each subsequent health plan since family planning took over the second position in the IV Plan. Thus the priority of the state in the health sector is fairly clear—strongly in favour of FP at the cost of other crucial health programmes.

Unfortunately such a breakup is not available for state health expenditure outside the plan. But at the state-level detailed disaggregation is available. Table 5 gives a breakup of various health programmes for Maharashtra and Gujarat during the VI Plan period. Water supply and sewerage is the largest single category of expenditure in each sate—as a percentage it is as high as 47.45 per cent in Maharashtra and only 22. 6 per cent in Gujarat.

If one leaves aside water supply, then medical relief accounts for the largest category of expenditure in both Maharashtra and Gujarat. This is followed by family planning, control of communicable diseases and ESIS. The other programmes follow a different sequence of priority in each state. The per capita per annum state health expenditure (inclusive of water supply) for Maharashtra and Gujarat works out to Rs 48 and Rs 35 respectively.

Thus the priority and pattern of expenditure for various health programmes is not very different from that we have seen for 'plan expenditure' for the country. Of course, it must be noted that Maharashtra and to some extent Gujarat are the better performing states vis-a-vis the health sector.

Role of State Health Sector

In the foregoing analysis we have seen that within the health sector two programmes stand out prominently—water supply and sanitation and family planning. Ironically both these programmes are not perceived by the people as health programmes. For the general population health care is synonymous with curative services and this does not have a very high priority with the state.

Why do water supply and sanitation and family planning feature as high priority programmes? Water supply itself has high priority with people, may be even greater than medical services, but this is not the reason why it is so heavily funded.

The role played by imperialist agencies is very crucial in understanding this. If one lays threadbare the development programme expenditures of the state it is clear that those programmes which receive financial support through various imperialist agencies, such as bilateral (USAID, ODA, DANIDA, etc), multilateral (World Bank, WHO, etc) or private (Ford, Rockefeller, Population Council, etc), get into the state's priority list. The Indian state, being part of the world capitalist system (though backward), is greatly influenced by it in its policy and programme making. Thus water supply and family planning and a few selected communicable diseases (malaria, earlier small pox, now measles and even AIDS) get top billing in the state's resource allocation. If one goes through the CFRA or RBI Finance Reports of any year and looks up the section on international debt the correlation between plan

priorities and public finances and foreign debt becomes clear. Power projects, transport and communication, industrial infrastructure, mining projects, irrigation projects, water supply schemes and population control projects are the major areas of international debt financing. These areas also happen to be the ones that take the cream of our plan public finances. These are the very areas in which India lacks technological skills and has to rely on multinational corporations. This is too good to be a mere coincidence. If one were to list all the significant water supply schemes and the population control projects in India there would not be a single project that did not receive foreign finances (see RBI, 1984).

This nexus does not exist only at the international level but also within the country between the state and private capital. In a capitalist state the government (the functional form of state) is a functionary of capitalism—its role is to protect and strengthen it. Thus the state's behaviour, even with regard to the health sector programmes, is a function of private capital. The state's financing patterns of various health sector programmes are primarily the fulfilment of the needs of private capital. At the time of Independence the Indian state lacked any significant health structure. The Indian bourgeoisie was not prepared to enter this 'social sector' and therefore it allowed the state to develop this sector. And today when a bare minimum of health infrastructure has been developed and is functional the bourgeoisie, following the footsteps of its western allies, has stepped in a large way in the health sector. In fact, in the next three or four years large financial investments by the corporate sector in health care have been planned.

Further the curative health care sector, which has priority with the people and which forms the *raison d'etre* of the entire pharmaceutical and medical equipment industry (overwhelmingly controlled by the private sector, especially MNCs), has received a very lukewarm attention from the state. This is because the entire private practice of medicine thrives on curative services. It is the life-line of the private health sector. Private practice of medicine, which looks after three-fourths of the population falling ill, has never been controlled by the state. It has been given a completely free hand to operate and amass surplus.

Most of the doctors who get into private practice are trained at public institutions run entirely through public finances. Thus the state is directly responsible for creating an exploitative private health sector. The state is also a very large buyer of drugs from the private drug companies. The state provides tax concessions for running private hospitals under the grab of 'public trusts' that are referred to as 'voluntary hospitals'. (According to the Directory of Hospitals in India Maharashtra state does not have a single private hospital. Jaslok, Breach Candy, etc are listed as 'voluntary' hospitals!).

Thus we may conclude that the state's health expenditure which has been gradually increasing over the years, grows in an unhealthy direction, is urban-biased, anti-poor and above all is invested for the health of private capital.

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Appendix-1
Health Expenditure During British Rule 1870-1939
(Rs million - annual average)

Category of Health Expenditure	Decade						
	1870-79	1880-89	1890-99	1900-09	1910-19	1920-29	1930-39
Central & Provincial Govt. Medical and Sanitary	6.2 (0.03)*	7.3 (0.04)*	11.6 (0.05)*	14.1 (0.06)*	23.0 (0.10)*	52.1 (0.22)*	57.0 (0.21)*
Military Medical	4.2	5.5	7.1	8.2	6.3	NA	NA
Municipal Water Supply Conservancy, Drainage, Hospital, etc	8.1 (0.04)	10.5 (0.05)	17.3 (0.08)	26.9 (0.12)	40.3 (0.18)	75.5 (0.32)	67.7 (0.25)
District and Local Boards	—	—	2.8	4.3	6.7	15.8	20.6
Sanitation & Hospitals	—	—	(0.01)	(0.02)	(0.03)	(0.06)	(0.08)
Total Health Expenditure	18.5 (0.07)	23.3 (0.09)	38.8 (0.14)	53.5 (0.20)	76.3 (0.31)	143.4 (0.60)	145.3 (0.54)
Total Govt. Municipal, District, etc. Expenditure	589.7	798.8	1026.7	1265.2	1679.6	2677.9	2651.4
Per Cent Health Expenditure of Total Expenditure	3.14	2.92	3.78	4.23	4.54	5.35	5.47

(Figures in brackets are Rs per capita per annum expenditure on health at current prices).
* includes military medical expenditure.
Source: Statistical Abstract of British India, relevant years: quoted in "The Politics of Health in India" by Roger Jeffery, California University Press, Berkeley, 1987 (forthcoming).

State in Medical Care

sujit k. das

The nature of state intervention in medicare has been determined by two factors the demand of the people on the one hand, and the ruling classes' urge to acquire legitimacy and credibility on the other. Often enough policies which have been a consequence of the pressures brought to bear by the working class, have subsequently adapted to benefit the interest of the dominant class effective medical care to the poor, can never, the article contends, be provide by a state geared to the interests of capital accumulation.

MODERN societies, without exception, view certain basic health care services as commodities to which every member of the society should be gauranteed access, regardless of their ability to pay. This general proposition seems widely shared among nations, whatever their cultural and political complexions; vastly different approaches, however, have been adopted for acting on that precept" (Reinhardt, 1982).

Reinhardt's statement reflects a somewhat universal value; but, besides approaches, the understanding and interpretations of the general proposition he mentions also differ widely. Though it has long been established that 'basic health care' includes food-cloth-shelter-safe water-sanitation, etc, as popularly understood in India it actually means medical care, i e, medical intervention to prevent and treat diseases. That is why the Indian state maintains a large number of institutions where a citizen, dying from some disease, may claim free life-saving medical aid. There is no state agency which provides free food to a citizen dying from hunger or for that matter clothing, shelter, etc, to the similarly deprived. Neither is there any demand on the state from any quartor to arrange for such provisions. In fact, conceptually it is yet to be accepted that the basic elements of health care should be provided free to the pauperised people; to each according to his ability—is the motto; one should earn his living—is the precept. Emergency situations, e g, disasters like floods, earthquakes, accidents, etc, of course, make exceptions. In contrast, universal free medical care by the state is not only welcome but such provision is actually there and more is being demanded.

The endeavour to provide medical care for its members by human society is as old as any other social activity. state, religious institutions, voluntary collective efforts—all have played their part. Modern societies, enriched by modern scientific knowledge, have turned their attention to basic health care with, as Reinhardt says, vastly different approaches. In the socialist countries, state intervention is almost comprehensive in all aspects though the citizens contribute in varying proportions to its financing. In the developed capitalist countries state intervention in the matter of safe water supply, education and sanitation is quite significant and, though food-clothing-shelter remains as yet an individual responsibility, various social security schemes help the pauperised citizens and guard against death from deprivation. As regards medical care, approaches are different. In the US there is no direct state intervention and the semblance of a free market is sought to be preserved, but with the introduction of medicare (for aged) and medicaid (for poor) programmes and financial support to other agencies, the financial contribution of the state has, steadily in the last two decades, come to bear the largest share in the national health care expenditure. United Kingdom's National Health Service is somewhat unique and rather incomparable among the capitalist countries as it is run entirely with state revenue. Other countries heavily depend on different kinds of insurance systems with heavy state and employer contributions. In Canada medical care is almost totally state care.

Among the developing and under-developed countries, the trend is similar. Pressure on the state to provide for more and more health care is put from all corners—deprived classes, liberal section, political forces and international community—albeit from different motives. Accordingly state health care is expanding more rapidly than private sector health care. The Indian scene may be reviewed in two categories—non-medical health care and medical care.

The debate in the wake of WHO's call 'Health For All' has brought about a change in the concept of non-medical health care. It not only includes food-clothing-shelter-safe water-sanitation-pollution-free environment, etc, but is also held to be dependent on education, economic security or effective employment, women's equality, social justice, political control over economy, etc. For all these factors, the supreme role of the economy is indisputable. The market economy does not care for the achievement of all these health determinants for the broad masses. Clearly, the private sector of the economy cannot be induced to work for equitable distribution of non-medical health care, nor can such health care be achieved through individual efforts. Its realisation depends entirely on the political direction of state policy and its effective implementation. In other words, non-medical health care for the masses depends entirely on state intervention for the development of new economic relations conducive to equitable distribution.

Why State Medical Care?

State intervention in medical care depends not so much on the economic structure of the social formation; all societies appear to agree on the state's increasing role in providing universal medical care. The extent and magnitude of state intervention depend primarily on political commitment and then on the level of development of the state as an institution and on the degree of its dominance over social activities. In India,

the operation of preventive medical intervention, e g, national disease control and eradication programme, routine immunisation, etc, is almost exclusively in the hands of the state. Free curative services operated by the state effectively reach only a few selected target groups, e g, government employees, including the armed forces, organised labour force (ESI), and the socially powerful minority in both urban and rural areas. The rest of the population depends upon various kinds of private and corporate services. All concerned people agree that the services are inadequate and effective curative services do not reach the largest section of the people in need. A variety of prescriptions have been offered as remedial measures and these should be considered in their political and economic dimensions.

It is often argued that liberal philanthropic welfare has given way to capitalist welfare measures, e g, medical care which is intended to contribute towards maintaining reproduction of labour; state medical care, like education, is actually a part of the social wage of the labouring class. This argument appears to be relevant in the context of an advanced capitalist economy where the role of skilled and highly skilled labour is significant and capital's stake in developing that kind of labour is high enough to justify large state allocations to medical care in order to maintain the health of the labour force. In the drive for accelerated industrialisation in USSR and China, state policy accorded priority to maintaining the health of the labouring force by organising medical clinics in each factory complex (Deacon, 1984; Wilenski, 1979). But this argument is not sufficient to explain the Indian situation. Labour in Indian industry and agriculture is mostly low-skilled and unskilled and the reserve force is so abundant that its continuing health and quality cause the least worry to the capitalists. There is as yet no evidence to suggest a linear co-relation between productivity and improvement of the health status of the people. Even in the case of the ESI, the apathy and neglect of the state as well as of the employers indicate that they are more interested in something other than the protection of the workers' health. On the other hand, the argument that the entire state medical care service is entended to earn legitimacy for the ruling classes and the existing social order and to secure credibility for the state as the benevolent friend of the poor appears to be more plausible. It will be evident if the real state of affairs prevailing in the operation of the state health service is reviewed.

State authorities never tire of proclaiming that the state service is free and is meant for the poor. Actually, both the principle and practice are otherwise. In principle—legal, constitutional and otherwise—state medicare is not meant for the poor alone. By policy the access is universal. Both the millionaire and pauper have equal rights to claim free state service. Not only that, the population groups who enjoy exclusive access to reserved medicare schemes, e g, CGHS, ESI, railway, armed forces, public undertakings, big industries, etc, also receive free treatment from state hospitals without restriction. Even foreigners are freely entertained as a routine. What happens really is that the larger portion of effective state medicare is cornered by the socially-economically-politically powerful sections who, in addition, are exclusive recipients of other medicare projects not accessible to the poor. That the real objectives of state policy are compatible with this situation is evident from the fact that state medicare infrastructure is concentrated in the urban areas; that provision of high cost medical technology, e g, C T Scanner, Echodiagnostics, cancer-therapy, intensive care, surgical super-specialities, etc, which have little relevance to the major medical needs of the poor (TB, leprosy, enteric disease, bacterial and parasitic infections, etc), is rapidly increasing; and that the state frequently spends large amounts for high cost treatment of dubious outcome for the VIPs. An example: state medicare in West Bengal is fairly well developed compared to other provinces. But even after the devastating experience of the enteric disease epidemic in 1984, the government is unable to provide for cheap oral rehydration salt packages to the chronically afflicted population on account of stringency of funds which does not impose any constraint, however, on the expansion of high cost technology proceeding as per schedule in the metropolitan hospitals frequented by affluent clientele. Secondly, state service is far from free for the poor. Supply of the needed essential drugs is grossly inadequate and people have to purchase these as a routine. In the urban and semi-urban hospitals it is now customary to engage at the patient's own cost an additional care-taker in order to obtain minimum necessary caring services. The practice of some form of payment as premium to the doctor or hospital worker for the privilege of admission in a free bed is still rampant in most of the provinces. Quite frequently such premiums ae obligatory for investigative, surgical and similar services. It should however be kept in mind that even with the premium, state service, on the whole, is much cheaper than the market product both for the poor and the affluent.

Medical Care vs Non-Medical Care

Official versions of state policy, expert commentators and the WHO strategy for Health For All—all in quest of better health for the people—emphasise non-medical health care and preventive intervention and underplay medical care. As a long-term strategic approach this cannot be disputed. But a good deal of ambivalence and many contradictions appear in the field of practice. The strategic approach takes into consideration only the conventional measurable indices of health, e g, mortality, morbidity, disability, water supply, sanitation, etc, on the one hand and the proportion of doctors, paramedics, beds, drug consumption, etc, per unit of population on the other, in determining the efficacy of health care service. But medical care serves a prime need which cannot be quantified or statistically measured

Healers have been venerated and honoured since the infancy of human society for the vital function they perform both at the individual and social levels; they respond to human distress. Most of minor illnesses treat themselves; people learn to tackle a good number of everyday physical ailments themselves; when people seek a healer it is a response to more than the mere physical illness but includes added factors of apprehension, fear and helplessness which compound the distress. The healer propounds an explanation of the causation of ailment (however weird), prognosticates, takes charge of the battle, relieves the patients of their helplessness, applies his technology (however primitive and absurdly ritualistic) of diagnosis and treatment and emerges triumphant when the self-healing ailment heals itself. The entire episode restores confidence and balance to the sufferer and his kinfolk, enabling them to again face the adverse world with renewed courage—the unknown enemy is now known and conquered and the healer, the weapon to tackle the enemy, is there. Even when the healer fails, he allays distress, offers comfort and finally legitimises death, the most fearful enemy, by performing rituals intended to ensure a comfortable after-life for the dead. This is one of the most vital psycho-social functions for mankind to adjust to environmental adversity in the struggle for survival and progress. Biologically potent therapy came much later, only recently. In fact, as late as in 1980, Oliver Wendell Holmes wrote that, except for opium and wine, "if the whole *materia medica*, as now used, could be sunk to the bottom of the sea, it would be all the better for mankind—and all the worse for the fishes". Modern doctors also perform the same psycho-social function, only they are immensely more successful owing to the remarkable development of potent preventive, life-saving, curing and relief-producing technology of medical science. But distortions of this very achievement have developed, influenced by economic and socio-cultural transformations. Modern medical care generated tremendous mass demand and was rapidly transformed into a commodity attaining its characteristic features. Doctors rely more and more on the infallibility of technology and are at the same time getting enamoured more and more of its commercial return. Time for consultation is now priced and cannot be wasted for demystifying, caring and personal attention. Drug industry, flooding the market with useless drugs, makes skyhigh profit so that access to essential drugs becomes dear for the poor. The very expansion of medicare services gave birth to bureaucratisation and de-personalisation. In short, while the demand for more and better medical care is increasing, escalating prices are pushing it out of the reach of most people.

Medical care continues to be one of the most pressing felt-needs of all societies. Medical care renders credibility to any health care service and ensure people's acceptance of it. China's post-revolutionary health policy is a case in point. Policy makers understood that in order to ensure mass participation in the public health programmes, the people's felt-need of medical care must somehow be met and they rapidly set up a comprehensive organisation to serve even the people in remote, inaccessible areas. To improvise, they requisitioned the services of the indigenous system of medicine. The point is to provide for some form of medical care to all regardless of standard and quality which could come later. The Chinese health system is now so organised that a citizen of a remote village is assured of the most sophisticated treatment, if needed, in an urban centre.

In our own society, preaching and practice differ. While almost everyone harps on the priority need for non-medical health care, in practice expansion of medicare service goes on unabated. Government health centres, established to provide comprehensive health care, have over the years turned into centres of curative service. People, who persistently deprecate the growing trend of setting up sophisticated diagnostic and curative centres, never fail to rush there for their own needs. The reason for this is not far to seek. Medicare needs of Indian people are so urgent and enormous that they overshadow all other needs. And their priority cannot be over-emphasised. Though it is well-known that availability of safe water is the final answer to the massive problem of diarrhoeal diseases, the instant need of the diarrhoea-stricken dying child is curative intervention and not safe water. To save the life of their dear ones, the poor risk further pauperisation, the extremely poor risk destitution. Medical care is a commodity which never fails to find consumers who cannot afford it.

To sum up, medical care is the most important felt health need of the people; medical care is the pivot of health care service; medical care adds credibility to health care programmes and ensures people's interest; medical care meets needs of the people which, though not quantifiable, are indispensable in acquiring strength to fight against adversities. And whatever role is assigned, on paper, to medical care, it will continue to play the dominant one in health care service. People's demand for more and better medical care will never diminish.

Medical Care Delivery

How then to ensure a certain standard of effective medical care to the people? At present the delivery of medical care is operated through three channels with some overlapping. Firstly, free care—through government and non-government hospitals and clinics. Secondly, indirectly paid care—through various medicare schemes for employed people, e g, ESI, government employees' medicare, corporate employees' medicare and insurance schemes. Thirdly, directly paid care—through open market which includes a few voluntary institutions. The system, as underlined earlier, has failed to provide medical care to the poor. That is why pressure on the state to provide for the deprived is mounting. The state, on the one hand, is not in a position to disclaim such responsibility for obvious political compulsions; on the other, it cannot really provide for a minimum standard of effective

medicare for the deprived population without jeopardising the existing exploitative economic order. To find the way out, several prescriptions have been offered as remedies. The ICSSR – ICMR report recommends a 6-tier organisation from the smallest unit at the lower level covering 1,000 persons operated by two part-time voluntary health workers. The required cost has been worked out to be very low, e g, Rs 30 per capita per annum. The entire scheme appears to be not only simplistic but idealistic as well. It also offers universal access for affluent and poor alike; allows private market to thrive; does not provide for guaranteed emergency care and rests on the premise that both the higher echelons of administration and the providers are imbibed with the spirit of selfless public service. Several other prescriptions include (a) people should be taught and trained in demystified principles of medical care so that they can take health in their own hands, (b) indigenous and non-allopathic systems should be adopted to develop an alternative cheaper culturally acceptable medicare for the poor. None of the alternative schemes suggests dismantling of the sophisticated modern medicare merrily operating in the market. Parallel existence of inaccessible and costly high grade and free low grade services devalues the latter and breeds demand for the high grade one. The poor are already aware of the virtue of modern medicine. True, owing to poverty, they have to go for the cheaper alternatives most of the time, but that is no indication that they love these alternatives or have reconciled themselves to using them for ever. Government experiment in West Bengal illustrates the point clearly. Government appointed homeopath and ayurved practitioners are in a few health centres. It is a common scene in those centres that they spend their days without patients while people throng to the allopathic counter even when the latter is attended by only a pharmacist. The most repugnant feature of the alternative prescriptions is the common objective that each is aimed at lightening the burden of the state. People should be made to realise that they are responsible for their own ill health and therefore must learn to take care of health hazards by themselves. Hence the slogan "people's health in people's hands". Or they ought to remain satisfied with traditionally superior, culturally compatible indigenous medicine with a few doses of cheaper but holistic homeopathy here and there. In any case, they should not bother the state for more costly modern medicare. The modern medicare system will be there but only for the privileged and affluent as usual. The alternative schemes have a common virtue. They spare the state large expenditure and at the same time see to it that its image is not tarnished.

For this purpose, a number of issues, e g, cultural compatibility, self-sufficiency, demystification, etc, have been broached in order to confuse the problem which is essentially economic. In fact, the chief contribution of modern science is to demystify the secrets of the universe—natural and biological. At the present level of knowledge, the ancient medicines stand almost totally mystified, while modern medical science has been able to demystify the phenomenon of ill health and health care to such an extent that even illiterate people now can acquire an insight into the socio-economic and biological dynamics of physical disease and its management. Self-help is another utopia. It has long been abandoned by humankind since the introduction of division of labour in social production. By no stretch of imagination does it seem advisable to consider creation of self-sufficient human beings producing their own material, biological and cultural necessities by themselves or immediate communities.

The development of state intervention in medicare has two driving forces behind it. Demand of the people on the one hand and the ruling classes' urge to acquire legitimacy and credibility on the other. V Navarro describes the relationship precisely. 'Social demands of labour' include increase of social wages, the comprehensiveness and levels of which depend on the strength of working class pressure; 'social demands of capital' include measures to smooth down and cushion the dislocation, uncertainty and dis-welfare created by the process of capital accumulation, e g, social security and health care. Navarro explains, "there is no single-factor explanation of social policy... there is no clear-cut dichotomy between the social needs of capital and the social demands of labour. Any given policy can serve both. Indeed, the social policies that serve the interests of the working class can be subsequently adapted to benefit the interests of the dominant class... the 'bias of the system' has always insured that these policies can be deflected to suit the capitalist class. Indeed, history shows that concessions won by labour in the class struggle become, *in the absence of further struggle*, modified to serve the interests of the capitalist class" (Navarro, 1976). Several spanners have been thrown into this convenient process of concession and legitimacy—fast rising cost of modern medicare, increased demands from all sections of population, increased awareness of the discriminatory distribution of state services, effect of the international slogan of Health For All, increased trade unionism among the employees of the state health services, etc, to name a few. Mere slogans and superficial measures now fail to contain dissatisfaction. It is now realised that provision for a minimum standard of medicare for all entails a magnitude of expenditure sure to undermine other state priorities determined by the ruling classes. Hence the urge and campaign for cheaper alternatives. Noteworthy is the fact that the alternatives are prescribed for only the poor. The state cannot afford to alienate the privileged classes.

What the Poor Must Demand

Underplaying of the role of medical care should stop. Such underplaying ignores the felt-need of the people. Rakku's story revealingly demonstrates that Rakku risked further pauperisation for the elusive life-saving medicare for her child; seeing the government auxiliary-nurse-midwife on her way to the city hospital, "she suddenly felt resentment towards this woman. She wondered why as a health worker she did not have

medicines for helping sick children. Why did she only have injections [vaccines] for healthy children and advice to mothers to stop having more children! Here was her child dying and this woman could not help her" (Zurbrigg, 1984). Valuable scientific advice about safe water, personal hygiene, immunisation, balanced diet, etc, do not cut much ice with the Rakkus.

Effective medical care to the poor will never be and cannot be provided for by a state geared to the interest of capital accumulation; nor can it be provided by collective humanitarian urge. India has a long tradition of philanthropic, charitable, humanitarian effort to provide medicare to the poor and such efforts have increased through the recent spurt in voluntary agencies' activities in the health field, but this has hardly made any ripple on the health scene. The deprived people will have to earn medical care; it must be demanded from the state.

A. State medicare should be exclusively reserved for the large indigent population, i e, people living below a predetermined income level. Other existing schemes of medicare be similarly reserved for the existing beneficiaries. Affluent people be left to fend for themselves. Semi-affluent people be assisted to develop their own medicare facilities through insurance system, as is prevalent in the developed countries.

B. To operate this scheme, the population will necessarily be divided into economic categories as has been for the rural rationing system. In marginal situations and in the case of exigencies persons from unauthorised categories may be entertained in the state institutions but in exchange of a price, not free.

C. Eventually other related functions will have to be modified and rationalised. For example, state expenditure on medical education will be steadily reduced to that optimum level necessary to train personnel destined for state service.

A host of objections and problems will come up in the course of implementation of this scheme. It has been argued that such a scheme is discriminatory, is not fesible and works against humanitarian principles. Surely it is discriminatory but it is a reverse discrimination in favour of the poor aiming to abolish the present discrimination and introduce equitable distribution. The feasibility of such compartmentalised service has already been established. Several such medicare services, e g, ESI, armed forces, railway, etc, have long been functioning. In Andhra Pradesh such compartmentalised public distribution service for foodgrains is being operated for the entire state. About humanitarian principles, the less said the better.

Is this scheme another alternative to meet the medicare needs of the poor? Will the state concede this demand if only its rationality and feasibility are established? The prudent answer is NO. This scheme is founded on the premise that no scheme of equitable distribution and social justice is implemented by the state in an exploitative, class divided society. A few sporadic benefits may be realised from time to time through class struggle to produce only some palliative effect. The demand under this scheme is entirely different. It does not call for some concession for a particular group. It is not only a demand exclusively for the deprived classes so that they have a concrete slogan to struggle for and organise, but also calls for restructuring of the entire medical care system of the society. Moreover, the prospect of earning an exclusive right will provide the necessary urge to struggle for it and, once achieved, the poor will be equally zealous in guarding it. Likewise, the danger of exclusive control of a state apparatus by the poor is apt to invite strong opposition and resistance. The present beneficiaries of state service will oppose it as they stand to loose an existing privilege. The controllers of the state exchequer will oppose it as it only entails increased allocation for the poor but opens up a possibility of establishing a system of accountability of the providers to the recipients. When this inevitable opposition comes, it instantly identifies the real beneficiaries, exposes the nature and utter inadequacy of the present system; it shatters the humanitaring camouflage of the state; it makes a dent in the legitimacy of the present order. In other words, this scheme envisages conflict and polarisation of the contending forces. It may act as a nexus for class struggle.

Then again, what happens in the unlikely event of the state conceding this demand? An exclusive state medicare service will necessarily render the situation conducive for the deprived classes to exercise control over it. The essence is control. Without control there is no participation. They only participate meaningfully who weild power and authority. The very exclusiveness will generate demands for guaranteed service, accountability of the providers, uniform and better standards, more state allocation for medicare—in other words, struggle for control. Struggle for control will soon make it apparent that without eventual control over the state itself, nothing could be achieved or sustained. It will soon be apparent that the fundamental problematic is political and economic. Without political control no change in the economic order is possible. Without economic change, provision of non-medical health care will remain elusive. This situation is not peculiar to health care. The same situation prevails in the other sectors of state policy, e g, education, housing, agriculture, etc. The same discriminatory practice operates under cover of universal eligibility. It cannot be reversed without political control. The way to achieve political control is struggle. It may also begin in medical care.

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The Irreversible Welfare State: Its Recent Maturation, Its Encounter with the Economic Crisis, and Future Prospects

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This article describes the influence of the current economic crisis on the welfare state in the advanced capitalist countries. The authors discuss how, under the surface of welfare state growth, the political relations of force have changed in favour of those social forces advocating fundamental reappraisal of the welfare state over those supporting its maintenance or extention. It is argued that, as long as democracy prevails, the welfare state is an irreversible major institution of advanced capitalist countries. While the building of a majoritarian anti-welfare state coalition seems impossible for the forseeable future, the authors do not rule out significant cuts in welfare expenditure in some countries and specify some of the economic and political preconditions for such cuts.

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RARELY in the modern history of advanced capitalism has there been a major institution that is so much talked and argued about with so little knowledge as the welfare state. Very little is known—in the sense of being digested by prevailing social scientific as well as political knowledge—of (*a*) the recent developments of the welfare state, (*b*) its part in the current international crisis, and, consequently (*c*) the future prospects of the welfare state. Given the severe space limitations of this paper, what will be attempted here can be no more than a modest contribution toward some enlightenment in these three problem areas.

Welfare State in Contemporary History

History is the mother and teacher of the future. Any attempt at an analytical understanding of future options and possibilities, therefore, has to start from a historical grasp of the present. Here we will concentrate on two aspects: the location of contemporary welfare states in state history, and the socio-economic size and ramifications of current welfare states.

Public social insurance, public health, and social care have at least a century-old history. The major international theoretician and architect of public welfare arrangements, William Beveridge, made his epochal contribution in the 1940s, and the accompanying economic theory got its major statement in 1936 wth Keynes' *General Theory*. This is common knowledge, but for an understanding of the present—and of the future—it is quite inadequate.

In fact, the welfare state as we experience it today is an outcome of the 1960s and the 1970s. In a long time perspective, the extraordinary changes, little theorised and little even noticed, of the sixties and seventies stand out.

In the relatively uneventful years of 1960-1982, overall public expenditure on the average grew by 24 percentage points in our ten selected countries. The combined effects of the two World Wars and the 1930s with its, sooner or later, ensuing turn of economic policy orientation (the arrival of Keynesianism) brought an increase in public expenditure of 16 percentage points between 1913 and 1949. In the 1950s, during the unprecedented boom, the average increase was 1.4 points, compared with 8.4 in the 1960s, and no less than 14 percentage points between 1970 and 1981.

The accelerated growth of Western states after 1960 has mainly been due to welfare state growth. In other words, the welfare state has been *the* major factor in the growth of state involvement in the life of the people it governs. No other force is comparable to it. The rather limited proportion of welfare commitments in the growth of the Danish and Swedish states is most probably in part a statistical artifact, hiding an increase in the number of public employees working in the welfare administrations of the ordinary state apparatus.

This silent change has also meant a major internal transformation of advanced capitalist states. In their everyday activities, Western states have changed from being mainly apparatuses of armed forces, bureaucratic ordering, and public transport and communication into predominantly institutions of transfer payments to households, public education, and public caring and social services. In short advanced capitalist states have in their everyday routines become welfare states. In Belgium and the Netherlands, welfare expenditure in the sense above occupied more than half of all public expenditure by 1960 (1, pp 88, 93). In Sweden this jump occurred between 1966 and 1968 (2,3). By 1981, all advanced capitalist states devoted more than half of their public expenditures for welfare state purposes, even the United States and Japan (1, pp 70). With regard to terms of public employment, in the Scandinavian states employees in education, health care, and social care now comprise between two-thirds and three-quarters of all public employment (4). (The actual figures are 62 per cent in Sweden (1981), 68 per cent in Denmark (1981), and 76 per cent in Norway (1980). All figures except employees in public enterprises operating on competitive markets.) In the Netherlands in 1977, about 57 per cent of all government and government subsidised para-statal personnel were occupied with

teaching, caring, and other social and medical services (5). (From the total of the "kwartaire sector" (5) have been subtracted private practitioners of medicine, dentistry, and physiotherapy as well as personnel in private child care.) In brief Western states have (largely) become post-bureaucratic welfare states.

Socio-Economic Ramifications of Welfare State

We have seen that the contemporary welfare state is not an elderly institution, susceptible to the ailings of old age. On the contrary, the developed welfare state is a very recent phenomenon, better characterised by the sometimes extravagant vitality of youth. In our time, the welfare state has also become a major institution of advanced capitalist societies. One expression thereof is the significance of the welfare state as a source of income. Between one-fifth (Japan) and one-third (Netherlands and Sweden) of the sum of the household income derives directly from the state. Calculated in terms of income recipients, the significance of the welfare state is even greater. By the late 1970s, old age pensioners and public employees together made up more than half of the voting-age population in Britain and Sweden, and close to half in Germany. In the United States, public employees plus recipients of social security and of social assistance constituted about 35 per cent of the adult US population in 1975 (6).

In the Netherlands, old age pensioners and public employees are not so many—roughly 30 per cent of the electorate in 1981 (7,8). On the other hand, given the massive failure of Dutch capitalism to provide employment the total number of people receiving their main income from the state is huge. In 1983, 49 per cent of all income recipients below the general pension age of 65 got their income from the welfare state, 27 per cent as receivers of social benefits and 22 per cent as public or para-public employees (9, p 320).

Welfare State and Economic Crisis

The current, now ten-year old, international economic crisis has, of course, affected the parameters of the welfare state. However, from the discrepancy noted earlier between the dramatic growth to maturity of the welfare state and the relative lack of attention to and comprehension of it, we should expect another lack of fit between real developments and the foci of prevailing public discourse. This is in fact the case. Ideologically and politically, the welfare state is currently under heavy attack. This phenomenon is most briefly summarised in the election of the militantly right-wing liberal regimes of Thatcher and Reagan, seconded by several other governments, most wholeheartedly by the Lubbers Cabinet in the Netherlands, and in the retreating positions of the Mitterrand government, of the US Democrats, the Dutch and the Danish Social Democrats, and the disarray of the British Labour Party. In social science, the way the wind is currently blowing is most directly left from the strongly increased influence and assertiveness of anti-Keynesian economics. But major social institutions can hardly be knocked down by rhetoric alone, either from electoral platforms or from academic chairs. Let us take a look at a few facts about actual developments.

Developed capitalist welfare states remain subordinated to the business cycles and the structural crises of the international capitalist economy. The current crisis has shown that generous systems of social security in themselves provide no security against unemployment. But anti-welfare statists cannot "have their grain ground" here; there is no *inverse* relationship between social policy extension and unemployment. The evidence is contradictory (Table 1).

Economic growth has become a weak predictor of unemployment, only a quarter of the variation in unemployment at the end of 1983 can be accounted for by the economic growth between 1978 and 1983 ($r^3 = 0.25$). Between the size of social expenditure (from which education has been excluded here in order to accentuate the more controversial social security aspect) and low unemployment there is a small negative relationship ($r^2 = 0.11$), as there is between social expenditure and economic growth ($r^2 = 0.12$). In other words, only one-ninth and one-eight, respectively, of variations in unemployment and in economic growth may be statistically accounted for by the extension of public social commitments.

Briefly and crudely summarising a long argument (which is developed and sustained empirically at some liength in reference 10), contrary to the McCracken Report (11) and other conventional wisdom, states can maintain a low level of unemployment even in the face of a deep international crisis, provided there is a deeply institutionalised commitment to high employment. But general Keynesian demand management is not enough; a compatible monetary policy and/or an extensive selective labour market policy is also required. And a crucial factor is non-market control over employment, whether through extensive public works and retraining as in Sweden, public subsidies as in Norway, public industrial employment as in Austria, publicly supported paternalism as in Japan, or public control of immigration in an immigrant-dependent economy such as that of Switzerland.

Combining the extension of social security commitments and institutionalised full employment commitment, Scheme I shows the typology of welfare states with regard to both employment and social security. Commitments to social security and commitments to full employment thus vary independently of each other, something that must be brought into the centre of the welfare debate and analysis. We may give our typologised countries descriptive labels:

1. The strong welfare state (Sweden), highly committed to social security and capable of preventing mass unemployment, even in the face of a deep worldwide economic crisis and a low rate of national economic growth (12).

2. The soft welfare states (Belgium, Denmark, Netherlands), generously committed to social security, but unable to control their labour market.

TABLE1: UNEMPLOYMENT, ECONOMIC GROWTH, AND SOCIAL EXPENDITURE[a]

	Unemployment	Economic Growth[c]	Social Expenditure[d]
Australia	9.5	1.8	12.8 (1980)
Austria	4.2[e]	1.8	24.1 (1980)
Belgium	14.9	1.5	32.6
Canada	11.1	1.6	15.5
Denmark	(10.6)[f]	1.6	29.0
Finland	6.2	3.8	23.3 (1980)
France	8.8	1.8	23.8
Germany	7.8	1.5	26.4
Italy	10.0	2.1	22.7
Japan	2.6	4.3	12.5
Netherlands	14.0	0.7	29.1
Norway	2.8	2.5	21.0
Sweden	3.4	1.5	(31.9)[g]
Switzerland.	(0.4)[h]	1.5	9.4 (1979)
United Kingdom	13.1	1.1	19.0
United States	8.4	1.8	15.0

Correlations: Spearman's rank order correlation
between unemployment and economic growth, r = 0.50
between unemployment and social expenditure, r = 0.35
between economic growth and social expenditure, r = 0.34

Because of the less than perfect comparability of the data, differences in unemployment rate of 0.5 per cent or less and of social expenditure of 1 per cent or less have been left out of consideration. Since the Swedish figure was lower in 1980 than 1981, Belgium alone is topranking in social expenditure.

Notes: a The selected countries are meant to be exhaustive of all advanced capitalist countries, except the smallest—Iceland and Luxembourg. New Zealand has been left out for lack of reliable employment data.

b Standardised rate of unemployment as percentage of the labour force in the fourth quarter of 1983. Data for Denmark, from Det Okonomiske Rad *Dansk Okonomi* December 1983, p 52 Direktoratet for Statens Indkob, Copenhagen 1983. For Switzerland, from *OECD Observer* 127, March 1984. The remaining countries from OECD *Quarterly Labour Force Statistics 1984*, p 76, Paris 1984.

c Average annual growth of GDP 1978-1983, in per cent. Data for 1982-1983 from *OECD Observer* 127, March 1984. For 1978-1981, from OECD *Economic Outlook* 33, July 1983, p 160.

d Public expenditure for health, social and welfare services (transfers, public consumption, capital expenditure, exclusive of education) as percentage of GDP in 1981 prices. From OECD *Statistical and Technical Annex*, Report No SME/SAIR/SE 83.02, pp 31-69. OECD, Paris, 1983 (unpublished).

e Third quarter of 1983.

f Non-standardised rate for 1983.

g The original data source had no final consumption and capital expenditure for social and welfare services. The latter have been assumed to be of the same size in relation to social transfer payments as those in Denmark. This will be seen as a conservative estimate.

h Non-standardised rate for 1982.

3. The full-employment oriented medium welfare states (Austria, Norway), giving priority to employment policy.

4. The states of socio-economic mediocrity (Finland, France, Italy, United Kingdom), distinguishing themselves neither in social nor in employment policy.

5. The full-employment oriented market states (Japan, Switzerland), dedicated to maintaining full employment but with limited commitments to social security.

6. The market-oriented states (Australia, Canada, United States) where, in spite of significant welfare state developments in recent years, the market is unequivocally given the upper hand in income as well as in employment determination.

The world of advanced capitalism is a world of wide variations in public and in individual life chances (1).

Real Impact of the Crisis

Table 2 shows that the average yearly growth of social security expenditure declined in almost all western countries under review (except in France) between 1975 and 1981. However, up to and including 1981, social security expenditure continued to grow at a respectable pace. There were considerable yearly variations, but with the exception of Italy in 1977, the United Kingdom in 1977 and 1980, Australia in 1979, New Zealand in 1980, and Sweden in 1984, in no country was there in any year an overall absolute decline, although there were declines in individual programmes, most often in family benefits (1).

For developments after 1981 we will have to resort to national data of various kinds. The Reagan administration has concentrated its cuts on the means-tested programmes for the poor, but social security (old age, disability, and survivors) benefits grew in real

SCHEME 1: A TYPOLOGY OF CONTEMPORARY WELFARE STATES[a]

Social Security Commitment[b]	Full-Employment Commitment	
	Institutionalised	Non-institutionalised
Major	Sweden	Belgium Denmark Netherland
Medium	Austria Norway	Finland France Germany Italy United Kingdom
Minor	Japan Switzerland	Australia Canada United States

Notes: a Data from Table 4 (social expenditure) and the analysis of economic and labour market policies in reference 10;

b The procedure of trichotomisation of social security commitments has been guided by a search for significant break points such that the difference between the lowest scoring country of one group and the highest scoring country of the group below should be larger than the difference between the lowest and the second lowest country of the same group

terms by 15 per cent between 1980 and 1983, and hospital insurance (for the aged) grew by 25 per cent (13, 14). In Britain under Thatcher, public expenditures on social security and personal benefits grew from £ 25.336 million in fiscal year 1978/79 (under Labour) to £ 28.444 million (in 1978 prices) in fiscal year 1982/83 (15, 16). In the Netherlands, net public transfers to households (net insurance premiums paid) grew from an average of 3.3 per cent of national income in 1976-1980 and 4.6 per cent in 1981 (when the Social Democrats took part in the government) to 5.0 per cent in 1984, exclusive of the growth caused by the rise of unemployment (and of unemployment compensation) (9, p. 157).

But figures do not always tell the whole truth. The welfare state expenditures are still growing, but this is not to deny that painful cuts and redistribution measures from labour to capital and from the poor to the well-to-do are being made by governments. This is true not only for right-wing liberal regimes, but also for coalition governments with social-democrat participation. The measures are nearly the same in most Western countries: (a) changes in indexation of benefits, implying less than full compensation for price increase; (b) more strict entitlements to benefits, such as unemployment insurance and taxed paid services; (c) certain tendencies toward privatisation, e g, a relative increase in number of beds in private hospitals compared with public hospitals, and accommodation of public-controlled services, especially in the sector of health services, to the private sector; (d) a tendency toward de-individualisation of rights on social insurance and restrengthening of the "family breadwinner principle" in entitlements to social insurance; (e) rationalisation, especially in the health services; and (f) shifting costs: less redistribution over the public budget and more emphasis on direct payments for services and insurance premiums. In Belgium, the Netherlands, and the United Kingdom these measures are accompanied by a discussion about a more fundamental reappraisal of the system of social security on the basis of actions taken by the government.

TABLE 2: ANNUAL GROWTH OF THE EXPENDITURES ON SOCIAL SECURITY[a]

	Percentage Growth		
	1965-70	1970-75	1975-81
Australia	5.3	15.6	2.8
Austria	6.4	5.8	4.6
Belgium	9.1	10.5	5.1 (1975-80)
Canada	11.5	12.9	3.3
Denmark	9.0	6.6	4.5
Finland	10.7	9.5	5.5
France	5.0	6.6	7.4
Germany	5.5	8.6	2.0
Italy	8.2	6.5	3.9
Japan	10.4	12.3	8.6
Netherlands	11.6	8.3	4.5
Norway	15.3	8.0	6.2
Sweden	10.2	9.6	4.4
Switzerland	8.9	10.4	2.7 (1975-79)
United Kingdom	5.3	6.3	3.9
United States	9.3	9.9	3.7
Average	9.4	9.2	4.6

Note: a Calculated from reference 1, in constant 1970 prices. Expenditures on health, temporary sickness, pensions, unemployment, family benefits, and other transfers.

With regard to the welfare state as a whole, the real impact of crisis policies has so far been marginal and unable to break the trend of growth. But it is worthwhile to investigate if these policies reveal recent changes in the political relations of force.

Welfare State and Political Relations of Force

The explosive growth of the welfare state in the sixties and early seventies is accompanied on the political plane by a strengthening of the position of labour *vis-a-vis* capital. This is the effect of wide-ranging social processes that have undermined partriarchy and the family control over production, challenged clientelist and religious forms of social control of production and class division, increased the scarcity of labour on the market, and diminished the dependence of the propertyless upon the labour market for their support (17). This development resulted in a compromise of the main political actors, wherein the welfare state provisions occupied an important place.

What happened to the political relations of force from 1975 onward? In most countries the crisis policies cracked the existing compromise. To answer the question more carefully, we have made, for a selected group of Western countries, a more thorough analysis of government social policy in the crisis.[6] (The analysis is based on materials from the project *The Political Future of Social Security: Political Demands and Social Relations of Force*, financed by The Commission for Research on Social Security (COSZ) of the Dutch Ministry of Social Affairs and Employment.) As a first result, we present two schemes. Scheme 2 contains an overview of the points in time at which a "crisis statement" is given, the "first significant cuts" are carried out, and the discussion about a more "fundamental reappraisal" of an important part of the welfare state, the system of social security, begins. Scheme 3 reveals the composition of the government at these points in time.

At the time of a "crisis statement" (and also of the "first significant cuts"), with one or two exceptions (Netherlands and Sweden) the social democrats formed a coalition government (in Belgium with the confessional and liberal parties) or took a dominant position within the government. Second, discussion about a more "fundamental reappraisal" of the system of social security and the launching of plans in that direction took place exclusively under right-wing governments. In the two countries where the discussion was advanced and the governments proposed plans for the reappraisal, the right was, in a relative sense, best represented in the governments that announced the "crisis statement" and carried through the first "signifi-

cant cuts." In the three countries where the discussion was started by conservatives and liberals (Denmark, Germany, and the United Kingdom), social democrats were defeated in an election after a (long) period of governmental power and were sent back to the opposition. These developments indicate that under the surface of a relatively unbroken growth of the welfare state, a change of the political relations of force has taken place: a development that needs more attention with regard to the future of the welfare state.

This shift in the relations of power should not be understood as an exclusive effect of changes in electoral favour. It is a more structural development not only of social and political relations, but also of social and political moods. It is a field of forces in which political parties, labour unions, employees organisations, and other organisations try to influence decisions that are made within the government, the parliament, and other organs. In this field one can, in general, distinguish two fronts with regard to the welfare state: on the one hand the organisations and forces that advocate a fundamental reappraisal of the welfare state, and on the other hand the organisations and forces that stand for maintenance and, where necessary, further extension of the welfare state. The first front is composed mainly of the conservative, the liberal, and larger or smaller parts of the confessional parties, the employers' organisations, and sometimes middle-class organisations. The other front is made up of the social democratic, communist, and other progressive parties, the labour unions, and organisations of consumers of services and recipients of benefits. The development in the relations of force since 1976 indicates a shift in the direction of domination from the "maintenance front" to the "reapparaisal front" (Scheme 4).

We can come to the more general conclusion that the resistance to significant changes within the welfare state, even when there is domination by the "reappraisal front", is so strong that a fundamental reconstruction of the welfare state is excluded. Even in the Netherlands, it is not obvious that the defeat of the trade unions in December 1983 weakened the position of the "maintenance front" to such an extent that the announced reconstruction of the social security system will be carried through.

SCHEME 2: THE POLICY OF WELFARE: A SEQUENCE OF ACTIONS

	Crisis Statement[a]	First Significant Cuts[b]	Fundamental Reappraisal[c]
Austria	1983	—	—
Belgium	1976	1980	1983
Denmark	1980	1980	—
France	1982	—	—
Germany	1975	1977	—
Netherlands	1978	1980	1983
Sweden	1980[d]	—	—
United Kingdom	1976	1977	1983

Notes: a "Crisis statement" refers to the moment that the government announces that the policy of welfare cannot be continued without changes.

b As a criterion for "first significant cuts" we use three standards. First, two quantitative standards: an annual growth of expenditures on social security of less than 2 per cent and/or a decline in the annual growth rate of more than 3 per cent. Also a qualitative standard: the changes in a quantitative sense are the result of obvious alterations in policy. This estimation is based on materials up to and including 1983.

c "Fundamental reappraisal" refers to the statement by which the government takes the initiative for a possible fundamental change of the social security system as a whole. This is usually done through the setting up of a public commission of investigation with far-reaching tasks.

d In Sweden the "crisis statement" was made by the incumbent bourgeois government in 1980. After the reelection into office of the social democrats in September 1982, the social cuts that followed the "crisis statement" were redrawn and did not take effect.

SCHEME 3: THE POLICY OF WELFARE AND THE COMPOSITION[a] OF THE GOVERNMENT

	Crisis Statement	First Significant Cuts	Fundamental Reappraisal
Austria	left	—	—
Belgium	coalition	coalition	right
Denmark	left	left	—
France	left	—	—
Germany	left	left	—
Netherlands	right	right	right
Sweden	right	—	right
United Kingdom	left	left	right

Note: a Here we use a threefold distinction: "right" (conservative-liberal-confessional), "coalition" (social democrats in a balanced coalition with one of the right-wing parties), and "left" (a government dominated by social democrats).

Future of the Welfare State

On the basis of the evidence given earlier on the socio-economic ramifications of the welfare state, and further sustained by the record of the effects of the welfare state upon the economic crisis, we conclude that the welfare state is an irreversible major institution of advanced capitalist countries. Or, to be more precise. It is irreversible by democratic means. The size of the population benefiting from the welfare state ensures that as long as democracy accompanies advanced capitalism, the core of the welfare state is safe. This goes against a great deal of hopes on the right and fears on the left. But it is not enough. We have seen above that the welfare state is a variable, not a fixed, entity; an assessment of its possible future will have to pay attention to possible variations. Our general analytical perspective involves two fundamental causes of welfare developments: socio-economic tendencies and socio-political relations of force.

The major push ahead of the welfare state is the aging of the population of advanced capitalist countries, except that of Belgium. The aging of the population means not only more pensions and more old-age services, it also means a great increase in health care. For the Netherlands, it has been calculated that for the period between 1981 and 2000, a growth of expenditure (for pension benefits, nursing homes, old people's homes, old people's welfare work, and medicines) of

more than 20 per cent is needed to maintain existing standards (18).

A second push for welfare state expenditure derives from unemployment. Currently, almost all predictions point to an enduring rate of massive unemployment among two-thirds of advanced capitalist countries, which have failed since 1975-76 to maintain more or less full employment. This means the establishment of a virtually permanent pool of unemployed. Except in Belgium, existing unemployment insurance is not geared to handling long-term and permanent unemployment. Under existing political conditions, permanent mass unemployment is likely to produce mounting pressure for economic provision for the long-term unemployed at a level above that of social assistance.

A third major pressure for increased public social commitments may be expected from population concerns. In most Western European countries the current rate of reproduction is negative, and it may be expected that procreation-stimulating social policies will be adopted. The Sweden, this is already a consensual issue.

Fourth, the number of single mothers is likely to increase. Particularly in countries with current high unemployment and low rates of female participation in the labour force, this implies an increasing demand for social assistance.

One significant alleviation of the pressure is the visible tendency of expenditure for public education to decline because of demographic changes in Western populations. For the Netherlands, this means a possible decline of expenditures between 1981 and 2000 of 20 per cent while maintaining the existing level of education (18, p 86).

The fiscal constraints of social policy are not absolute givens. They are to a large extent politically defined and affected by policy outcomes. The enduring crisis does not mean a permanent depression, as shown by the current upturn in which a growth rate of 2.5 pr cent is forecast in 1984 for the European Community and 4.5 per cent for the.OECD as a whole (9, p 19). A provisional calculation by the OECD Secretariat for the seven major Western countries estimates that, because of declining needs for education expenditure, a constant GDP share of welfare state expenditure could ensure a 0.7 per cent annual growth in real social benefits till 1990 (1). One the whole, and by and large, there seems to be little reason for doubt that the current level, or even a moderately higher one, of social welfare commitments is payable.

However, there are at least two qualifications to be made here. Pensions insurance schemes in many countries are very sensitive to lower rates of growth and/or to high rates of employment. In some countries revisions have already been made, and further ones are not unlikely. Second, some countries have already incurred large financial deficits in their public sector. The mounting interest burden of this debt and the narrowed policy margins of big structural deficits are most likely to constrain furture social policy. This holds, above all, for Italy and Belgium, but also to a lesser extent for Denmark, the Netherlands, Canada, and Sweden (16, p 27).

SCHEME 4: CHANGES IN THE RELATIONS OF FORCE BETWEEN THE "MAINTENANCE FRONT" AND THE "REAPPRAISAL FRONT"[a]

	Domination Maintenance Front	Balanced Relations	Domination by Reappraisal Front
Austria	1975-1982	1983-present	
Belgium		1975-present	
Denmark	1975-1980	1980-1982	1983-present
France	1975-1982	1982-present	
Germany	1975-1977	1977-persent	
Netherlands	1975-1977	1977-1982	1982-present
Sweden	1975-1980	1980-1982	
	1982-persent		
United Kingdom	1975-1976	1976-1979	1979-present

Note: a This overview has been made on the basis of electoral results, changes in the composition of governments, actions to economise, and the results of confrontation between both fronts.

Socio-Political Forces of Welfare State Demands and Defence

At least one major social force behind the welfare state is growing and is likely to become more active and demanding in the future: that is old people, the "senior citizens." They are growing in numbers, and they are becoming more vital and active because of the combination of increased longevity and reduced retirement age. The aged are also by far the most important beneficiares of the welfare state. Pensions and health care of the aged make up the bulk of social security expenditures in all countries. As the French specialist Anne-Marie Guillemard has said: "The welfare state is, first and foremost, a 'welfare state-for-the-aged'" (19). The demands of the aged are likely to grow for social, cultural, and recreational services, and the aged are likely to be vigilant with regard to their pension rights and level.

Another interested welfare state defender is the group of welfare state employees. Their number is unlikely to grow in the near future, but it is quite significant already, between a quarter (in Sweden) and a tenth (United States, Germany, and Italy) of the economically active population (20). This is a well organised and highly articulate category of people. Welfare state employment has been especially important for the emancipation of women, who usually occupy most of these jobs. Large-scale attacks on the welfare state are therefore likely to meet with resistance from articulate women, even those outside welfare-state employment.

Finally, the labour movement is in modern times the major political protagonist of the welfare state. In countries with high unemployment, the labour movement is currently being weakened, and tendencies to division between private and public employees are appearing. However, even after some recent setbacks, the labour movement in most advanced capitalist states is

located on a historically high plateau of strength and acquired rights (17).

Precondition of a Right-Wing a Roll-Back

We have given a number of reason for our conviction that the welfare state is irreversible by democratic means, and also for our belief that in the foreseeable future even successful cuts and restrictions will not change its fundamental base. However, countries already vary in their line-up for or against the existing welfare state and further variation cannot be excluded. On the contrary, there are strong grounds to expect a further divergence among advanced capitalist states over the coming five to ten years. This divergence derives mainly from the divergent impact of the current economic crisis, in particular with regard to unemployment. The enormous differences in the rate of unemployment (shown by Table 1) are likely to have an enduring, diverging impact for two reasons. First, all OECD estimates indicate that these differences will remain for the rest of the 1980s (21). Second, and also an explanation in part for the first reason, contrary to pre-crisis predictions or fears, mass unemployment has not led to massive socio-political upheaval. Mass-unemployment Netherlands remains as calm as low-unemployment Sweden.

Before going further, however, a major qualification has to be made. Politics and policy are not amenable to scientific prediction. Rather than expecting their specific predictions to come true, political scientists would do well to adopt as a major law of politics the title of a book of stories by Andre Maurois, *Toujours l'inattendu arrive* (always the unexpected happens). We should formulate all of our predictions as conditionals: "if *a*, then (probably) *b*."

The fundamental precondition for a significant right-wing roll-back of the welfare state is a division, a demoralisation, a decomposition, and an at least partial political marginalisation of the broad coalition of socio-political forces that supported and sustained the welfare state expansion in the 1960s and 1970s. The building of a socially majoritarian anti-welfare state coalition, dedicated to capital accumulation and to private business ideology seems impossible in the foreseeable future. The best evidence for the latter assertion is given by the comparative class analysis of Erik Olin Wright. Wright combines the scientific commitment of Althusserian Marxism with post-orthodox theoretical sophistication and the large-scale empirical surveys of American Big Science. His results indicate that even in the United States, about 60 per cent of the labour force has at least a minimum of pro-labour or working class consciousness. In Sweden the corresponding figure is 90 per cent (22, 23).

What then are the preconditions for a division, demoralisation, decomposition, and partial marginalisation of the welfare coalition? First, high unemployment and/or other kinds of worsening in the condition of labour, incurred under a government in which the major left-of-center party takes a significant part. The record of the successful low-unemployment countries strongly suggests that such a major policy failure is not primarily due to the openness to and force of the international economic system, but to half-hearted, contradictory, or adverse policies. The electoral defeats of British Labour (in 1979), of the US Democrats (in 1980), of the Danish Social Democrats (in 1982), and the Dutch center-left (in 1982) fit into this pattern, as does the current defensive of the Mitterand regime. However, the original division and demoralisation of the forces of the left and the center-left have to be reproduced for the right to be able to make significant inroads into the welfare state. There are a number of possibilities for this reproduction, which are not mutually exclusive.

Second in our list of preconditions, and the strongest and most reliable mechanism for reproducing division, demoralisation, and decomposition of the left, is a dualistic scoio-economic development. A dualistic economy and society—a dynamic, well-off sector and a stagnating or declining sector of low-wage or unemployed misery—is the medium-term goal of the new right, consciously or unconsciously. And the fact is that some advanced capitalist societies are beginning to take on those features earlier held to be characteristic only of Third World societies. Thus in Britain, an increase of unemployment from 5 per cent in 1979 to 12 per cent in 1982 was accompanied by a slight increase of consumer expenditure, measured in constant prices (24). The US economy grew by 7.6 per cent between June 30, 1983 and June 30, 1984, but unemployment was still 7.1 per cent at the latter date (25). The more a dualistic economy and society is created, the stronger the roll-back pressure on the welfare state. The current upturn of the international business cycle is likely to produce significant dualistic effects even in societies and politics not so extreme as those of Britain and the United States. The economy is also beginning to grow again in Belgium, Canada, Denmark, and the Netherlands, but mass unemployment and the misery of the unemployed remains.

Managing a dualistic economy and society by democratic means is largely dependent, however, on the character of the political system. This is our third variable: the more elitist the political system, the easier a right-wing attack on the welfare state. One important measure of elitism is the prevailing electoral turnout. In this respect, the Western democracies currently fall into three groups (26).

1 The exclusive democracies, with an electoral turnout of about 50 per cent of eligible voters: Switzerland and the United States.

2 The reduced participation democracies, with a 70-85 per cent participation rate: the United Kingdom, Japan, the Netherlands, Finland, Denmark, Norway.

3 The full participation democracies: the remaining countries.

Elitist politics, reinforced by first-past-the-post electoral systems, mean that Thatcher and Reagan were elected into office by less than a third of the electorate.

Finally, there are policies reproducing left-wing

defeat. We began our list of variables conducive to right-wing attacks on the welfare state by indicating the fateful effects of anything less than whole-hearted commitment to full employment in the period 1975-1982. We will end it by listing a set of policies most likely to ensure the reproduction of the dominance of the right. From the point of view of the right, the policies may be read as goal targets.

1 Disunity between trade unions and the political parties representing labour. The greater the disunity, the greater the chances of a right-wing roll-back. This is partly a question of institutional structure—the extent of elitist middle-class character of the party, which is thereby starkly distinguished from the unions. The US, British, Dutch, and French cases indicate this. But it is also something that is affected by policy, as exemplified by the *Schulterschluss* between the Social Democratic Party and the unions in Germany after the eviction of the Schmidt government.

2 Concessions from a weak position in the hope of reciprocity. Givebacks of collective-bargained wages and other benefits in a weakened position are likely to produce mainly internal division and demoralisation, and unlikely to bring forth equivalent concessions from the counterpart. This tactic has been pursued by some US unions—that of the steelworkers above all—and, en masse, by the Dutch unions, seconded by the Dutch Labour Party. The main effect of this is likely to be a strengthening of the self-confidence and assertiveness of the political right and of the employers. The West German unions and Social Democrats have, after losing office, opted for another tactic, the result of which is more respect for the concerns of labour.

3 Selective social policies. There is a dilemma in social policy between general and selective policies. In order to be effective and truly general, general policies have to be high in transfer payment and in quality of services. This makes them very costly and also tends to reduce their redistributive effects. On the other hand, selective social services tend to be or become of lower quality, and selective social policies are or become very vulnerable to political attacks, since the set of beneficiaries is restricted. Therefore, the more selective (geared only to the poorest) the social transfers and social services, the more likely they are to be subject to roll-back attempts. Thus, to the extent that left-of-center parties and trade unions adopt selective social policies, e g, in the form of "basic" services and transfers plus optional superstructures, the more likely it is that the level of the "basic" provisions will become the object of attack.

4 Decentralised labour policies. The strength of the labour movement, and of the welfare coalition as a whole, rests on its numbers and its unity. To the extent that policies are adopted that are not based on those assets, the right and the anti-welfare state coalition will gain. This implies that the more collective bargaining is decentralised, and the more specificities of private and public sectors, of industrial branches, and of enterprises are opted for in the current period, the stronger will be the position of capital, and of the anti-welfare state forces.

The welfare state has become a major and irreversible (by democratic means) feature of advanced capitalist societies. The current discussion of the welfare state crisis is little more than an ideological fad, which serious researchers cannot take seriously. On the other hand, a divergence of Western welfare states is likely to take place in the foreseeable future. The failure to maintain full employment that began in 1975 is likely to have enduring effects. Further, the reactions to the earlier failures diverge. The West German labour movement seems to have learnt from its past, whereas in the Netherlands, for example, we see strong left-of-center forces heading for further defeats. However, we would rather end by saying that the future remains open. As political human beings, we are committed to full employment and to social security.

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Sex Determination Tests

A Survey Report

THE practice of prenatal sex determination followed by selective female foetus abortion is one of the most striking examples of how advances in science and technology are employed for the furtherance of women's oppression. Although this inhuman practice has been in existence in India for many years, it is only last year that anything like an organised and sustained mass campaign against it became a reality. While Bombay has been a principal centre of the campaign, it has now also spread to other cities, including some small towns. A concrete manifestation of this positive change has been the formation of the Forum Against Sex Determination and Sex Pre Selection.

The collective efforts of several women's groups and other voluntary organisations, spearheaded to some extent by the Forum Against Sex Determination and Sex Pre-Selection, have yielded some notable results. Two private bills concerning this issue were introduced last year—one in Parliament and the other one in he Maharashtra legislature. This goes to prove that both the Union and the state governments were forced to take note of the issue because of the growing popular protest. The bill in Parliament is yet to come up for discussion. Nevertheless, the minister of state for health and family welfare did convene a meeting in New Delhi last December to discuss the issue. The Maharashtra government formed a committee in September last to study the problem and suggest a set of corrective measures. The private member's bill in the legislature came up for discussion in the 1986 winter session at Nagpur, but the same was withdrawn following an assurance from the government that the committee was still studying the problem and that, on the completion of the study, the government would itself initiate appropriate action in the matter.

As part of its activities, the state government-appointed committee commissioned me for the Foundation for Research in Community Health (FRCH), Bombay, to conduct a short study of the prenatal sex determination tests and female foeticide in Bombay city. The study was conducted in November 1986 with the objective

a) Determining the extent of the spread of sex determination tests and female foeticide in Bombay city;

b) Finding out other related aspects of this practice; and

c) Knowing the views and perceptions of the doctors involved in this practice.

Fifty private gynecologists, chosen randomly but with a view to covering the entire city and the suburbs, were interviewed in person during the course of the study. Some of the important findings of the study were:

1 Eighty-four per cent of the gynecologists perform amniocentesis for the purpose of sex determination. These doctors together perform on an average 270 aminocentesis tests per month.

2 Some doctors have been performing aminocentesis for the past 10-12 years. But a majority of the doctors (over 85 per cent) have started performing these tests in the last five years. On the one hand, this shows that Bombay is one of the first urban centres where SD tests and female foeticide started. On the other hand, it is evident that the debate that took place in the early 80s had a significant anti-publicity effect.

3 Only very few (upto 5 per cent) of the aminocentesis tests conducted are done for the detection of genetic defects.

4 Seventy-five per cent of the doctors interviewed said that over 50 per cent of the women who come for the tests belong to the middle class, whereas 85 per cent of the doctors said they do not get women from the lower classes for SD tests.

5 It is generally believed that it is only women with four or five daughters who go in for SD tests and female foeticide. But the study showed that the proportion of women going for SD tests when they have four or more daughters is quite small and that a majority of the women coming to the SD clinics are mothers of two or three daughters. Significantly enough, 24 per cent of the doctors said that 20 per cent of their patients had only one daughter. Thus, it appears to be a growing trend among the public to go in for SD tests in the second pregnancy itself, if the first issue happens to be a girl.

6 About 30 per cent of the doctors said that in nearly 10 per cent of their cases, the women already had one or more sons when they came for SD tests. This findings explodes one more myth that only those women go for SD tests who have no sons and only daughters. This trend moreover, appears to be on the ascendancy.

7 A majority of the doctors contacted in the study see SD tests and female foeticide as a humane service to women who do not want to have any more daughters. Some doctors also fee that SD tests and selective abortion of female foetuses are a good method of promoting family planning and controlling population growth in the country.

8 Six out of the 50 doctors said that they also per form chorion villus biopsy for sex determination.

—Sanjeev Kulkarni

Isolate Apartheid Health Care

THE Anti-Apartheid Movement in Britain has been campaigning for the isolation of the racist apartheid regime in all areas—political, economic, cultural and sporting for 27 years now. It has been realised that the policies of apartheid in segregating health care in South Africa and the inaction of the authorities in the face of rampant malnutrition and preventable disease amount to state-directed genocide against the country's black majority.

Recognising this and that health is an emotive issue which effects everyone and that everyone can therefore relate to, in 1979 health workers within the Anti-Apartheid Movement joined together to form a Health Committee. The mandate was to use health as an issue to educate people about apartheid and to mobilise health workers to support the international boycott. Since then Health Committee members have researched the health situation and produced campaigning leaflets, documents and a newsletter on health in South Africa. We have travelled up and down the country speaking at meetings and mobilising people in the struggle against apartheid.

Health and Liberation our newsletter is produced quarterly and covers the latest update on health in South Africa as well as news of our campaigns in Britain.

Exchange of medical skills in knowledge between Britain, South Africa has gone on for many years. British nurses are recruited to work in South Africa, lured by the prospects of sun, sea, sand and higher wages. The need for them lies in the racist ruling that black nurses may not care for white patients. Thus whilst black nurses, unemployed are relegated to the Bantustans, white British nurses are recruited to make up the shortfall of staff for the whites-pnly hospitals.

Many medical students go to South Africa for three months 'elective' period as part of their training and many doctors go to work there for short periods. These people are attracted by the regime's publicity that pathology can be seen in South Africa at a more advanced stage than elsewhere in the world. This is true, but it shows the true callousness of the regime that it can use the misery of the nation's black majority—created by their denial of facilities for the prevention and early detection of disease—as a way of attracting people to break the international boycott and make up the shortfall in doctors which has arisen through the denial of adequate places for training African people as doctors. To all these groups of health workers we have directed specific campaigns not to go to South Africa to work or on lecture tours.

Our international work to gain the expulsion of South Africa from international medical bodies began in 1981 when the Medical Association of South Africa (MASA) applied to be readmitted to the World Medical Association. A major international campaign was conducted with extensive briefing documents circulated covering the medical treatment of Steve biko and the inability of MASA to address itself to the collaboration of doctors with the security police and the inequalities in and fundamental issues behind health care in South Africa. International opinion was mobilised against MASA. The campaign culminated with MASA's readmission solely on the basis of the voting system which is loaded towards the United States. However all the African countries resigned, the WMA lost its consultative status with the WHO and in 1983 the British Medical Association withdrew. The WMA was thus left as an impotent and unrepresentative body.

A similar campaign was conducted at the International Planned Parenthood Federation which ended with South Africa's resigntion in July 1986, and currently we are campaigning for South Africa's expulsion from the World Psychiatric Association and the International Dental Federation.

Another important facet of the struggle against apartheid is direct material solidarity with the liberation movements. With this in mind we established the Medical Aid Campaign for Southern Africa to collect money for medical supplies for the ANC and SWAPO. We have sent a large amounts of books and drugs to the ANC hospital in Tanzania at the Solomon Mahlangu Freedom College and to their clinics in Zambia and Angola.

Over the coming few years, the struggle in South Africa will be reaching its most crucial stage and with this comes an ever more urgent need for concerted international action to gain the total isolation of the apartheid regime and the final victory against the forces of racial and national oppression in South Africa. Health workers throughout the world must unite with this goal to contribute in a small way to the final victory.

Rachel Jewkes
Secretary AAM Health Committee

Towards Rational Therapy

THE Prescription Guidance and Information Services (PGIS) of LOCOST is an educational effort to promote awareness about the correct use of medicines. PGIS is therefore for the benefit of both prescribers as well as patients. Two main aspects of PGIS being proposed are:

(1) Information dissemination to doctors who write prescriptions and
(2) Guidance to the patients regarding the correctness and use of medicines prescribed in a particular condition.

The objective here, is to help the patient, the end user of medicines to know the correctness of the medicines prescribed. the PGIS will give comments on following aspects of prescription: correct medicine for a particular diagnosis, adequacy of the treatment, the uselessness or harmful effects of any medicine, the side-effects of the medicines required, the dosage, alternatives available both in terms of cost, quality and nature of medicines, etc. Wherever possible, other aspects of the therapy will also be explained. This will

help the patient by developing an understanding regarding the treatment given to him/her. This will also equip the patient and relatives or friends to question and to ask for more information from prescribers in future. Thus the ultimate aim is to build up consumer awareness and initiative to bring about a change towards more rational therapy.

LOCOST is aware of the limitations of PGIS: Personal examination of the patient may not be feasible, the scope of PGIS may not cover all diagnostic situations as also the fact that a large number of 'successful' treatments may not be touched, and so on and so forth. The service may not be useful for the patient as it will take at least 10-15 days to give a balanced view on the prescription. However, queries by doctors for information can be attended to faster. LOCOST is keen on not encouraging legal battles between the patient and the doctor. PGIS is a beginning, a collective effort to facilitate awareness, education and action. Action towards more rational therapy and towards conserving scarce resources of patients as well as that of the community.

LOCOST is also prepared to facilitate prescription medical audits of hospitals, dispensaries and community health projects, if so requested. You may be a like minded doctor, a patient or a person simply interested in social change. Contact: *Prescription Guidance and Information Service (PGIS)*LOCOST, Ist Floor, Premanand Sahitya Sabha Hall, Opp. Lakadi Pool, Dandia Bazar, Baroda 390 001.

Miracles and Profits in Sickness

A NURSE who focussed a small research project for a post-graduate university course on a private food allergy clinic managed to achieve a relatively high mark from the tutors involved, and it was also considered worthy of publication in a scholarly journal. To her amazement the doctor whose clinic had been studied objected to the publication, not because of any feared damage to his professional reputation, but because of certain implications seen behind the student's work—especially the open discussion of the sordid subject of money.

There are a number of diseases where medical science has not discovered or developed a method of entirely halting their progress and treatment is limited to controlling or alleviating the symptoms, but not the spread of the disease itself. These conditions typically attract imaginative mirage "cures" which are difficult to get, expensive, or both. The cure is often proclaimed as some commonplace naturally occurring substance—igonred by modern western technology—which, according to anecdotal claims, has been used for years in a remote part of the world. Sometimes the product or treatment method is a secret which cannot be disclosed to the general public, but you can always buy bits of the magic. Whatever the story, evaluation by independent scientific workers will prove fraught with snares and delusions.

If some unfortunate person whose name has publicity value falls ill, (s)he may be treated with the remedy and live happily ever after. Recently a former pop singer, hitherto not widely known but nonetheless of some public interest, fell ill; and her symptoms were attributed to multiple allergies. Personal friends and a sympathetic section of the public expended much good will, time and effort in what appeared to be a good cause. The patient was flown to Dallas, USA, to Dr Rea's Environmental Unit, but her luck did not continue; voluntary funds of sympathisers at home dried up and she was not shown returning home in triumph. She returned as she had left—on a stretcher with an oxygen mask attached to her face, as she inhaled the only unpolluted vapour she could tolerate.

It has been said that "A fool and his or her money are easily parted"; sadly many patients would seem to be fools, if judged by the large sums of money they seem willing to pay for treatment of very doubtful value. Maybe it doesn't matter what treatment patients have if their belief in it is enough to effect a cure, but the long-term consequences of 'miracles' have also to be considered.

What happens when the dream fades, when the symptoms return or new ones come in their place? The despair and frustration must be magnified, as the patient has once again to struggle with a handicapped identity. Having attended an unorthodox clinic the patient may not only be financially broke but, more difficult to repair, psychologically damaged by the disappointed dreams offered by modern medical messiahs.

It costs a lot of money to run private clinics, and to pay attractive salaries to people who remove themselves from incremental ladders in the NHS, and need financial incentives to get involved in work that is of doubtful validity within scientic medicine. It is not difficult to find private practitioners from various disciplines who will quite readily remove NHS equipment and surgical supplies to "get their clinic started." When they are challenged about this exploitation of the health service, one is reminded that the patients who attend the private clinic cannot be treated by orthodox methods and as they are paying their NHS contributions it is all OK. While a hospital porter may get taken to court for removing flowers from a tip outside the hospital, the consultant who sends a junior nurse down to surgical stores to collect an expensive piece of equipment is able with impunity to 'transfer' the hospital instruments to the private clinic and reap the benefits from the fee-paying customers.

Doctors and nurses who work in private clinics using untested methods which are either innocuous or dangerous, are prostituting themselves by capitalising on the dignity and prestige afforded by their medical or nursing qualifications. It is indefensible to take advantage of the trust patients place in health care practitioners, and to make financial gain out of their vulnerability.

—Virginia Scott

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Towards a Left Critique of New Drug Policy

anant r s

The long awaited new drug policy has prompted this piece so that RJH-readers may get some systematic idea about this issue, especially its economico-political aspect, albeit in a summary form. For a detailed treatment of the basic issues involved in the drug policy, readers may refer to some of the sources at the end. A special issue on Pharmaceuticals and Health is being planned in December, 1987 and will carry a substantial left analysis of issues in drug policy.

THE NDP represents a typical example of the 'new' thinking in the ruling class circle and the new method of functioning. First about the latter. A lot of show was made about consulting various experts and of giving a hearing even to the representatives of the All India Drug Action Network. (AIDAN). But all this facade meant nothing in practical terms; or perhaps the drug industry used 'tonic-M' much more liberally this time. The NDP was suddenly announced in a hurriedly convened press conference; bypassing the Parliament. The 'policy' consisted of only a breif statement amounting to about 1500 words—That's all!! When a lack of a detailed draft was criticised by all analysts, the government came out with a somewhat detailed 19-page announcement. When one reads this pamphlet a little carefully, it is clear that it was written *after* the 'policy' was announced. The press statement of the December 18, 1986 was not a summary of a policy document since no such document was ready the then.

For example, the press statement of December 18 says that. "A National Drug and Pharmaceutical Authority will be created. This authority will be an apex body which will have representation from all the concerned agencies including those from the industry. Among other things, it would go into the question of rationalisation of existing fomulations in the market including the banning of formulations of harmful nature. . ." When one looks for an elaboration of this point in the detailed policy announcement, to one's utter dismay and shock there is not even a mention of "representation from all the concerned agencies" nor of "banning the formulations of harmful nature"!! To release a brief statement to the press and then to prepare the main text is a mockery of the norms of even bourgeois democracy. The deletion of these to small concessions (announced in the press statement,) given to the movement for a Rational Drug Policy was perhaps on account of bowing to the pressure exerted by the drug industry to scrap these concessions. To silently drop certain measures already announced is shocking indeed.

The earlier policy of 1978 was based on the report of the famous Hathi Committee which had at least a few Members of Parliament (though there were no representatives of the concerned trade unions and of consumers.) The policy-making was done this time entirely by bureaucrats and technocrats. The Drug Consultative Committee of the Parliament was not involved. The content of this NDP is therefore as bad as its flimsy form. None of the issues central to the Drug Policy have been seriously considered except the ones related to profits and production increase. All the important issues have been adequately highlighted by different science and health groups, some of which were dealt with by the famous Hathi Committee more than a decade back. Instead of making progress beyond the Hathi Committee there has been a regression right from the basic stage. It is, therefore, not much of a surprise that the content of the policy is also reactionary.

Freer Hand to Multinational Companies

The drug industry in India in under the domination of the MNCs. The various ill-effects of these MNCs have been adequately proved by different studies—commercial exploitation of Indian consumers through transfer-pricing; huge outflow of capital through repatriation of profits in different forms, drain on the foreign-exchange account; huge social waste on account of extravagant selling expenses, disinformation of doctors, insistence on brand-names, production of irrational and hazardous drugs when the same drugs are not allowed in their parent country, etc. It is because of these ill-effects that the Hathi committee had recommended nationalisation of these MNCs. The Hathi committee's recommendation did not include confiscation (i e, nationalisation without compensation) or worker's control along with nationalisaton. But even this radical bourgeois recommendation was not accepted by the Indira government.

The New Drug Policy has on the contrary given further concessions to the MNCs. "For the production new bulk drugs, and drugs produced for exports, there will not be any restrictions on the MNCs, even though it is well known that MNCs tend to import penultimate products from their parent-companies at extravagant prices and hence are responsible for a drain on the Indian economy even for foreign exchange account. Production of penicillin, amoxycillin, cephalexin etc, has also been completely decontrolled except for FERA companies." But the hitch is, there are now only 3 FERA companies; the rest of the MNCs have now become 'Indian' because they have diluted their foreign-equity to less than 40 per cent as per the FERA. Out of these eight a further six have announced their intention to dilute their foreign-equity to less than 40 per cent, so that like in other ex-FERA companies, the foreign share-holders would continue to take all the policy-decisions but the company would now be legally counted as Indian. Thus a couple of restrictions applicable to the FERA companies would now be applicable to only two companies. There has been a demand to put all the ex-FERA companies is a separate category and not to treat them on par with the rest of the Indian companies. But under Rajiv Gandhi's leadership, such a demand has not been accepted. Self-reliance is no more a serious slogan.

Increased Rates of Profit

Under the New Drug Policy, the drugs have been recategorised as category I and II. Category I would consist of those drugs which are required for various national health-programmes; and category II would consist of 'other essential has not been published. The whole aim of this exercise is to reduce the total number of drugs under price control. Only those drugs belonging to these two categories would be under price control. The prices of the rest would be 'monitored'; but they would be out of the price control basket. Going by the list prepared by the National Drugs and Pharmaceutical Development Council (NDPDC), three years back, this list of "essential drugs" would consist of around one hundred drugs, instead of the required number of around two hundred. Today, about 360 bulk drugs are under price control; the majority of these would now join the category of decontrolled drugs.

Even those which would continue to be under price control, would fetch a higher profit-rate than hitherto. According to the Drug Price Control Order (DPCO) of 1979, category I consisted of life-saving drugs which were allowed a 40 per cent 'mark-up;' category II consisted of 'essential but not life-saving' drugs with a permissible mark-up of 55 per cent and category III consisted of 'useful drugs, new drugs' with a 100 per cent mark-up. The rest, mainly consisting largely of quite useless drugs could earn unlimited profits. The NDP has now two categories with a "Maximum Allowable Post-manufacturing Expenses" (MAPE) a new term for 'mark-up'—prescribed as 75 per cent and 100 per cent respectively for these two categories. (Readers may note that 'mark-up' or MAPE includes manufacturer's profit plus costs and profits of transport, and sale.) This hike in mark-up would cause a price-rise in life-saving and other essential drugs in these two categories by 12 per cent to 25 per cent according to the government's own admission. Many essential drugs are not going to be included in these new categories I and II and hence would be decontrolled. Their prices would increase 'as much as the market can bear'. As a result the prices of essential drugs would rise much more than this official estimate. According to the Secretary of the Indian Medical Association, which is otherwise a conservative body, the drug prices would rise by 60 to 300 per cent.

Unnecessary Price-rise

Many of the leading national dailies have refrained from criticising head-on this increase in mark-up. Many of them have called it as a 'sensible' step. If one takes the arguments of the drug industry, uncritically, this step appears sensible indeed. But this increased mark-up and consequent price-rise in unjustified on three accounts:

a) The drug industry argues that the earlier mark-up of 40 per cent and 55 per cent was 'unremunerative' This assumes that the cost-price as given by the drug industry is not fictitious. The cost calculations furnished by the industry to the Bureau of Industrial Costs and Prices (BICP) are considered as trade-secrets and are not available for scrutiny by any other public body. Let these figures be published and be verified by other experts in the field. The study quoted by industry sources to show that the earlier mark-up was not remunerative was done by the National Council of Applied Economic Research (NCEAR) but was funded by the drug industry. Let there be an independent study by a public body to determine the real costs of manufacturing. It is only then the question whether the existing mark-up is genuinely inadequate can be meaningfully discussed.

b) It is true that the wholesaler stockist claims 8 per cent of the selling price as his commission and the retailer a minimum of 11 per cent. These selling costs are in addition to transport and sales-promotion costs. This leaves comparatively limited profits for the manufacturers when the mark-up is 40 per cent (i e, when the selling price is to be upto 40 per cent higher than the manufacturing costs. This calculation, it may be noted, assumes that the manufacturing costs have not been fictitiously jacked up.) If this is the situation, the real solution in order to increase manufacturing profits is to reduce the costs and profits of distribution and marketing. The wholesaler's margin should be reduced to 3 per cent as in the case of other sectors. Secondly, the promotional expenses can be drastically reduced. Giving free samples, gifts to doctors, dinners after 'scientific seminars', etc, etc, are huge social-wastes which need to be stopped. But the Indian state is not in a position today to control the profiteering of even a section of the commercial bourgeoisie (the stockists). That is their problem. The left should ask why should the people pay the price for the timidity of the Indian state? Similarly, high-promotional expenses are "necessary" for monopoly capitalism, but the left has to ask—" why should the people pay for these necessities of monopoly forms of competition'? In case of the MNCs, these promotional expenses were as much as 33 per cent of the costs as per the data collected by the Lovraj Kumar Committee.

c) Today drugs are costly because they are available mostly in the form of drug combinations. Most of these drug combinations consist of an essential drug and one or more unnecessary or useless or even harmful ingredients. For example, popular analgesic brands like Aspro, Anacin, Powerin etc, etc, consist of aspirin as the essential ingredient and in addition one or two unnecessary ingredients. The price of aspirin is 3 to 5 paise, whereas that of these irrational brands two to four times as much! AIDAN has, therefore, demanded that all such irrational drug combinations should be banned and that only rational, essential drugs be made available under generic names only. If there is a sufficiently strong movement which makes the government accept this demand, then prices of a overwhelming majority of drugs would be drastically reduced. (Prices of single-ingredient drugs will not be reduced much.) A rise in mark-up if, and to an extent genuinely necessary, can be allowed only if this above demand is accepted. In such a case, the price of aspirin would be increased by one or two paise but since there would no more be any costlier irrational brands (Aspro, Anacin etc.) available at all, the consumer's expenses on analgesics would still be much less. This demand of AIDAN has no been accepted by the government because the movement is not strong enough.

This demand is not a socialist demand in itself since it does not question the very existence of the capitalists in the drug industry. All it says is that "you earn a reasonable rate of profit by selling really useful drugs and not a lot of junk in addition." The World Health Organisation and other such

non-socialist bodies have also been advocating the sale of only rational, essential drugs under generic names. The problem is, the people's movement, the health movement is not strong enough today to force the government to discipline and control the parasitic, antiquated interests like those of the stockists, or the monopoly-interests in the drug industry. Though monopoly capital as a whole is in the dominant position in India, a control over their reckless profiteering *in one sector* is possible even within bourgeois bounds if the people's movement is strong enough. This has been achieved to a certain extent in Bangladesh due to the combination of public pressure, historical accident and populist initiative by the government. A similar thing can happen in India also.

Delicensing and Indigenisation

According to the industry, licensing means a lot of unnecessary beaurocratic interference (which also breeds corruption) with the "freedom of enterprise". But this is an antiquated, 19th century thinking. That "free-market economy" leads to repeated small and big crises which are too painful for the people and hence inconvenient to the capitalist class as a whole and therefore, capitalism needs to be regulated at least to a certain extent has been proved in theory and in practice over and over again the world over. It is true that some of the licensing procedures and other governmental regulations are too cumbersome today and they also create another parasitic layer of administrative beaurocracy which sometimes harasses the individual capitalists or other citizens for its own corrupt interests. Thus a regulatory mechanism which has evolved historically to smoothen to a certain extent, the anarchic function of capitalism is not doing its job properly.

The solution to this is not to abolish the regulatory mechanism itself; but to simplify it, to make it more efficient and functional. But under Rajiv Gandhi's leadership, there is not even a concern for overall planning in the interests of the capitalist class as whole. The new 'modern' policy-makers have been yielding in an *ad-hoc* manner to the purely sectional interests of the Indian and foreign monopolists or sometimes to the purely sectional interests of other sections of the capitalist class. This is at the expenses of the working-masses and also at the expense of the long-term interests of the Indian capitalist class as a whole. The policy of delicensing in the drug-industry by the Rajiv-regime is a case in point.

Before the announcement of the NDP, the Rajiv regime had delicensed 82 drugs which means any company can produce any of these 82 drugs to any extent without prior permission of the government. Now according to the NDP, this policy is to be 'progressively extended'. The reasons given for this policy are: to remove unnecessary hurdles in the way of the industry, so that there will be abundant production of those drugs which are in short-supply. But in reality the consequences would be quite different:

a) Many of the essential drugs have been in short-supply today not because of the licensing system (a few exceptions apart) but because they were under price-controls. The drug industry could get a much more higher rate of profit in the production of decontrolled drugs and hence it concentrated its efforts on the production of these high-profit though mostly useless drugs. Of the 94 drugs delicensed, 75 so far (even before the announcement of the NDP) have been open for all sectors for production. But the MNCs and big companies by and large neglected their production. In the NDP, except for about a hundred drugs, all the rest would have no price-controls and hence the drug industry would continue to neglect these 100-odd priority essential drugs and would continue to concentrate on the rest. The shortages of priority essential drugs would continue so long as the non-essential, useless, irrational drugs are allowed to be produced and moreover are allowed higher-profit rates.

In case of certain essential drugs the existing capacities are today underutilised because the drug-companies have not been interested in a 40 per cent or 55 per cent mark-up. But now that the mark-up on these drugs has been increased to 75 per cent and 100 per cent, the drug-companies may now fully use their existing capacities. In the short-run therefore, there may be increased production of some of the essential drugs. This should not be interpreted as "success of the delicensing policy". In the long run, newer capacities would be developed for the decontrolled drugs more than those for the priority essential drugs.

b) Whatever limited planning that exists in capitalism requires that the planning authorities can intervene to stop/reduce or encourage the production of certain drugs or to intervene to balance the growth of different types of companies in different areas. Delicensing would mean the drug production would be entirely left to the chaotic market forces. The government would not be able to do anything about it, nor would it be able to threaten the monopoly companies with the stick of the licensing authority if these companies indulge even in brazen malpractices to fleece the consumers.

Delicensing would not be applicable to FERA and MRTP companies. But now legally there would be only two FERA companies and only a couple of Indian drug companies would be counted as MRTP companies since now the limit for inclusion in the MRTP list has been raised to Rs 100 crore by the Rajiv-regime.

The deleterious impact of delicensing can be congertly visualised since 12 drugs in March, 1983 and 82 more in June, 1985 have already been delicensed. As a result, a number of monopoly companies have registered capacities for production of many delicensed drugs in quantities which are 3 to 10 times the targets for the seventh Five Year Plan! Generally, most of these capacities are not utilised by the MNCs. Registrations are made primarily to preempt competition! For example, Duphar Interfram had 39 registrations in 1980-81; but utilised only 18 of these; in 1984, it acquired eight registrations but used none of these. The government cannot do anything about the chaos thus produced.

The ex-FERA companies would now more easily push out other companies and this would, amongst other things, push up the import-content of drug-production in India. A study of production of 8 drugs by MNCs after delicensing has shown that the import of these drugs has increased substantially. For example, Boots produced 20 tonnes of Ibuprofen and imported 4 tonnes in 1980-81, whereas by 1984-85, the imports of this drug by Boots increased to 62 tonnes but indigenous production by Boots increased to only 51 tonnes.

Delicensing would, therefore, lead to a further control by

the monopolies over the Indian drug industry and a further chaos with all the ill-effects for the people as well as for the balanced development of the Indian capitalist class as a whole.

Probably in order to stave off criticism on the forecasted increased import of drugs due to further delicensing the government has announced in the NDP, a scheme if 'indigenisation'. The NDP lays down that in cases where the import content of a product is more than 20 per cent, the drug companies would be required to submit an annual plan of how its production is going to be indigenised. This is a very loose formulation. Suppose, a foreign company unnecessarily imports, say codene, and prepares a costly, irrational cough mixture by adding a number of unnecessary ingredients to it so much so that the imported essential ingredient comes to less than 20 per cent of the total cost then, this new restriction of 'indigenisation' would not be applicable to this product. Thus vital, essential ingredients can continue to be imported in large guantities. Secondly, there is no time-limit given for 'indigenisation' nor any punishment specified if the companies do not observe in practice the plan of 'indigenisation'.

What is in fact needed, and is technically, definitely possible, given the developed technical capacity of the drug-industry in India, is more or less a complete indigenisation in say three-five years and rapid, drastic reduction in the current rising drug-imports (Rs 198 crore in 1984-85!) Sudip Chaudhury (see references) amongst others, in his detailed study, has shown that this is technically very much possible. The Indian state, because of its class-character is not able to take this step even today. On the contrary, during the last five-six years (even before the Rajiv regime), it has been forced to give more and more leeway to MNCs. The NDP is yet another example that Rajiv Gandhi's leadership has considerably accelerated this proces.

Broad banding

This is another measure to "remove the unnecessary hurdles in the growth of the industry." Broad-banding means that if a drug-company gets a permission for the production of penicillin, then now it can produce all types of penicillins and chemically related analogues like ampicillins and the like. The companies would not be required to take separate permission from the drug controller for a new formulation once the basic type has been allowed. If such broad-banding is done for single-ingredient bulk drug only, then it is a sensible step within the chaotic capitalist economy because companies can produce in the same plant, chemically related products in changing quantities depending upon orders they receive without asking for a licence each and every time. This can enable them to fully utilise the production-capacities they have built.

But the NDP allows broad-banding of formulations also. This means that if a company has a licence to produce a mixture of say three types of analgesics or vitamins, it can change their proportion or change a bit the chemical structure of one or more of its ingredients and sell the 'new' product under a new brand name. Earlier, the companies had, at least, to undergo the formality of applying and getting a permission. Now there will be a totally uncontrolled growth of all sorts of irrational drug-combinations sold under a range of newer brand-names. It would become more or less impossible to monitor the prices of the new formulations in order to check price-rise. Monitoring the quality of drugs would also be a mammoth task for the government since it is impossible to check the ingredients qualitatively and quantitatively if we have over 50-60,000 formulations.

Quality Control

The NDP seeks to make Good Manufacturing Practices a statutory requirement. This was quite an overdue step. But the problem is, there is no mention of qualitatively improving and strengthening the existing too weak, too ineffective and corrupt drug-regulatory authority. The statutory requirements would, therefore, remain on paper.

The NDP is to make a compulsory certification system for quality-control from 'recognised institutions'. This means, now there will be specified institutions for this purpose. Whether such institutions would be private or public has not been mentioned. Going by the Rajiv regime's trend towards privatisation, it is likely that privatisation will take place here also. The data with private laboratories is considered trade-secrets and generally it is impossible to get these data to find out whether a particular private company has been doing its job honestly or whether like the notorious Chemical Labs involved in the JJ Hospital death-scandal, the private laboratory is giving false reports. Though many public authorities tend to be as secretive, public laboratories can be more accountable with increased public pressure. In case of private laboratories, it is their constitutional bourgeois right to keep their trade-secrets confidential.

The government does not want to spend money on increasing the number of public laboratories upto the required number whereas it is willing to squander money on all types of useless or anti-people projects. Hence the move towards privatisation. This must be stoutly opposed. At the same time, as a measure of rational utilisation of existing resources, public bodies like laboratories in research-institutions, universities, etc, can be entrusted to a certain extent, this task by fortifying these facility-centres with the needed extra equipments and personnel. This would obviate to a certain extent the need to build new facility-centres from scratch. Whether the existing system can do this is a moot point even if socially, it is quite a viable propositon.

Medical Issues

Health and science groups in India have identified the following key-issues from a medical aspect as part of a rational drug policy; none of which find a place in the NDP.

i) Preparation of a priority essential drug-list and a comprehensive rational drug list for India. Production of drugs to take place in accordance with only these lists and no other.

ii) To assess quantitatively the drug needs of the Indian people on the basis of a study of prevalence of the disease-pattern in the country and to plan the production accordingly.

iii) To completely and immediately ban all the irrational and hazardous drugs. Only drugs as specified in (i) to be allowed.

iv) Complete abolition of brand-names and replacing them

with generic names, with the company's name in the brackets; for example, "Penicillin-V (Alembic)".

v) Stopping the 'disinformation' of doctors and consumers by drug companies. Continous compulsory reeducation of doctors and relevant education of consumers by state medical authorities.

vi) Strict check on the unethical marketing practices by the drug companies; a ban on incentive-schemes and on giving samples and gifts to doctors by drug companies.

vii) Adequate supply of drugs free of charge to poor people through the government set up. Rational utilisation of the existing budget and increasing it rapidly to the adequate level.

vii) To stop the continuing colonial heritage of step-motherly treatment being given to the non-allopathic systems of medicine; to encourage research in these systems with financial and other support. At the same time to disallow the commercial production of any drug by any company unless it is accepted as scientifically proved (effective and safe) by appropriate bodies. Encouragement to ayurveda does not meant that Richardson-Hindustan be allowed to avoid taxation or to get other concessions by naming its Vicks Vaporub as herbal medicine! To enact that medical practitioners would use only those medicines or therapies in which they have been adequately trained by recognised institutions.

The NDP talks about only the standardisation of non-allopathic drugs and preparation of standard formulary for non-allopathic systems of medicine. There is no serious research policy nor any attempt to curb production of irrational (may be hazardous also) medicines under the name of ayurveda of the misuse of these medicines.

ix) All medical research on human beings must be statutorily required to confirm to the 1975 Helsinki (Mark II) Declaration. This should be strictly followed in case of contraceptive research also.

None of these medical demands have been accepted. One may conclude that the NDP is only a pricing and 'liberalisation policy' with no concern for rationalty or people's health needs. The foregoing account shows that as an industrial policy also, it is clearly reactionary and anti-people.

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Medical Officers—The 'New Middle Class'?

I WAS a little bit surprised by Sujit Das's rather sharp response (Organising doctors: a difference in approach, *RJH*, Vol I:2) to my critical comments (*SHR*, Vol II:3) on his article and my separate piece on 'Organising Doctors' in the same issue.

Das feels that my remark that his article is a "shamefaced defence of the interests of the doctors" is a rude one. The dictionary-meaning of "shamefaced" is "bashful, shy, retiring, modest. . ." and has no rude connotations.

I am not sure whether I should go into a detailed debate about the questions of terminology raised in the second paragraph of his response. Some people including Das may find it irrelevant. I would only point out that a mode of production is a relatively stable set of relationship consisting of a specific intertwining of productive forces and production relations and which reproduces itself over and over again. Petty-commodity relations by their very nature cannot constitute a mode of production (a stable, self-reproducing mode) but must disintegrate over a period of time; general practitioners would, over a period of time, more and more be replaced by hospital-owners-capitalist doctors on the one hand, and the wage-earning doctors on the other hand.

Now about the central issues: The main difference in approach according to Das is:-

1) "Phadke wants to organise doctors towards the end of fulfilling the tasks set by his own lofty ideal" Das, however, believes that "such idealistic approaches have never helped".

I plead guilty to his first charge; I would only hasten to add that the "lofty ideal" is not my personal invention. All those who believe in scientific socialism from the point of view of human liberation believe in a "lofty ideal" of a revolutinary charge. His second charge is however, a little off the mark. I have not taken any idealist approach. I have started with a "materialist analysis of position of doctors", and have then tried to point out the contradictory class-location of medical officers—medical officers being one important layer within the category of wage-earning doctors. Based on this materialist dialectical analysis, I have questioned the existing strategy of organising this new middle class "*mainly* on the basis of their trade-union demands" (emphasis added).

2) Das disagrees with my critical attitude towards doctors: It is, of course, true that a socialist health system cannot be run without doctors. But it is also true that a revolutionary socialist transformation in the medical system cannot be *initiated* by a new middle class organised mainly on trade union demands. Such a change can only come (as a part of a broader revolutionary transformation) through revolutionary coalition within and outside the health system in which medical officers as a *social layer* may or may not participate. It should be the attempt of marxists to bring at least a section of this new middle class to the side of the revolutionary programme; and my contention is that this cannot be done by organising them mainly on their trade union demands. Upholding the interests of medical officers as wage-earning health-workers is not enough. Scientific socialists have to be critical about their interests as officers. There has to be an independent platform clamouring for a revolutionary-change in the 'health-system'. Such a platform will take a dialectical approach to the contradictory interests of medical officers. It is not necessary that the majority of the new middle-class comes to the side of the revolutionary programme. There is a more numerous other section of doctors (junior doctors) and much more numerous paramedics who are more likely to come to the side of a revolutionary programme in the field of health. Those medical officers who do not join such a platform today will have to accept and implement after the revolution, the programme chalked out by this platform. Das, however, disagrees basically with my characterisation of the medical officers as part of the new middle class. For two reasons—the first reason is rooted in his misunderstanding of the concept of the new middle class. I have explained my understanding of this term at some length in my note '(Organising Doctors; Towards What End?)' and it should be clear to anyone that I have not 'adopted this formulation' of identifying "the highly skilled wage-earners of advanced capitalist society as new middle class." For me, their position as new middle class is not due to their "skills" but derives from their role as officers. Das's second reason is that "by no stretch of imagination could India be labelled as an advanced capitalist society;" and the new middle class is a product of advanced capitalist society. India is, of course, not an advanced capitalist society like the West, but yet we have monopolists like Tatas and Birlas. In certain sectors, we do have signs of advanced, monopoly interests; and the new middle class (executive engineers, foremen, supervisors, medical officers all those who perform the function of the labourer as well as that of capital as officers) is very much a reality in India.

3) Das disagrees with me on empirical grounds also. ("I have not found these doctors, as a class, performing the function of capital, of supervising, extracting work from the paramedics. . .") The problem is tht Das continues to talk about "doctors in service" as a homogenous category,

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whereas I have distinguished between doctors with hardly any administratively supervisory or executive function, e g, the junior doctors on the one hand, and the medical officers who have to perform these functions on the other. If one goes to any Primary Health Centre, one would immediately come across a series of executive, supervisory tasks over the work of the paramedics that the medical officer has to do. It is because of their status as 'officer' that the MOs at PHC get well-built quarters or bungalows (though no such accommodation has been built in many new PHCs;) whereas the junior doctors share one room amongst 2-4 doctors. The MOs get a salary which is higher compared to that of the junior doctors though junior doctors are many a times clinically more competent and are more overloaded with work. The MOs can be compared with the parademics also. The salary and the facilities that the medical officers have, are more than would be explained purely by their training if we compare them with the paramedics (like the ANMs). It is because of their dominant position as officers that many medical officers illegally earn money with impunity through private practice. Medical officers *as wage-earners* have many problems and that is why they have been unionising. But marxists, scientific socialists should not point out only to their problems but also must bear in mind their status as officers.

Contrary to Das's assertion, I have not 'discounted trade unionism as such', nor have I said that doctors should behave as if the world around is not commercial. I only wanted to point out the fact that Das has not given any class-characterisation of doctors though the title of his article raises this expectation and though he raised this question in the text also. Instead, the article gives an account of the problems faced by the doctors without looking at their contradictions and hence becomes a kind of a one-sided defence of the interests of doctors.

—ARS

(*Continued from page 77*)

responsibilities to serve the needs of the dominant class. Total state control is a hightened level in the process of socialisation. On the other hand, at the present moment it is obvious that total state control is not equivalent to people's control. Our conception of people's state or proletarian state has received a jolt from the experience of the socialist countries. People's participation also remain elusive without sharing in power. A rethinking is perhaps in order to conceptualise people's control in political and organisational terms.

But then it is also on observable fact that total state control or major state control, in whatever form, have brought about more equitable distribution of health care among the people. Its contribution in human values has proved to be immense.

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—Smarajit Jana



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—Frederick Engels

(From *The Condition of the Working-Class in England,* 1892)

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Nightmare of a Dream

ON DECEMBER 2, 1942 the first nuclear reactor went critical, releasing for the first time the enormous energies of atomic fission and ushering in the nuclear dream. But the reality was to be different; the dream rapidly turned into a nightmare. By the end of that decade not only had energy from the atom claimed 'war victims' but it had also shown its potential in killing, maiming and scarring for life anyone who worked with it. As early as August 19 a young worker at the Los Alamos 'atom bomb laboratory' working on fission studies died an agonising death after accidental exposure to radiation even as his numerous colleagues transporting fission material or experimenting with it were becoming permanently affected. By the fifties while several countries had built commercial reactors producing electricity, well-developed weapons programmes were also under way. And that was when the myth of the peaceful atom took shape and gained substance.

The nuclear debate, in addition to being a human rights issue directly impinges on all aspects of health care. A nuclear war, even a limited one, would be completely unmanageable by even the most efficient and most sophisticated health care system. (See p 112) Moreover no weapons system, even if meant as a deterrance, and however rudimentary/skelatal can be built up without some kind of testing of the devices. This has a direct consequence for the burden of ill-health among people not only of the affected region, but globally. And then there is the expenditure on armaments which is eating into the already meagre health and welfare budgets. While this is true of all countries, it has a more disastrous impact on poor nations. The 'peaceful atom' too is a health hazard. Three Mile Islands and Chernobyls can with the increasing proliferation of nuclear reactors, happen more frequently. With the secrecy which is an integral feature of the international nuclear industry, we may not even know when and if such disasters have taken place. Besides, evidence is accumulating on the long-term effects of low-level radiation, once thought to be 'harmless'. (See p 113)

'Atoms For Peace'

It is not an accident of history that the Atoms for Peace programme was proposed by Eisenhower in 1953. By then the military expenditure on nuclear installations had overshot anything that the country had spent even during times of war; the anti-bomb lobby while certainly not influential enough to change the course of development, at least had nuisance value; nuclear reactors whether for peaceful uses or for war weapons development were essentially the same; under US legislations weapons technology could not be shared with non-weapons countries—an important political lever for other kinds of gains in international diplomacy; it was only logical therefore to devise ways and means of continuing and expanding research and development efforts in nuclear sciences which while being ostensibly 'civilian' could easily be harnessed to war efforts when needed.

Thus the technical linkages between peaceful and military nuclear reactors—i e, the fact that it is during the process of controlled fission that the bomb material is produced or that the enrichment plants used to produce fuel for the 'peaceful' nuclear reactor can also, with sufficient modifications, be used to manufacture bomb material—have been politically reinforced. To argue that the two, the peaceful atom and the military atom are different is neither politically nor technically tenable.

It is in this context that the Indian nuclear programme got under way. It would be incredibly naive today to believe that the Indian bourgeoisie at the time of independence were not aware of the weapons potential of the peaceful nuclear programme. The fact that the programme has from the beginning been accorded high priority in terms of funding, that it has always been under the prime minister's direct control, the creation of the Atomic Energy Act with its unbelievable powers to suppress information, and the fact that the department's accounts have never been open to public or parliamentary scrutiny or audit by the Auditor General of India are obvious indications that the weapons angle has always been kept in perspective in developing the programme. Events in subsequent years especially in the last decade have given further evidence of this.

The nuclear debate is not new. While the dissent of the 50s was generally focussed on nuclear armament, the first ever protest against a nuclear power reactor was organised in 1957 in the US. But it is in the seventies that the nuclear debate came into its own. Throughout the 60s even as more and more 'peaceful' nuclear reactors were being built, data was also accumulating about radiation-related deaths among victims exposed to nuclear test fallouts, about the numerous things that could go wrong in a nuclear reactor, and about the potential long-term effects of low-level radiation.

Throughout the fifties the US continued to test nuclear weapons in a variety of geographical locations—66 of the 200, were in the Pacific ocean. While radiation damage from the fallout had been accumulating slowly over the years throughout the area, it was the Rongelap or the Bikini test which brought home to the world not only the horrors of the nuclear armaments programme even during peace time, but also the horrendous coverup used by the US and every other state which has had anything to do with the

atom—the denials, the coverups and the secrecy. Children of Rongelap played in the 'snow' from the massive fallout from the test which entirely covered the ground for 78 hours before the US decided to inform the islanders of the deadly radiation and evacuated them. The first five years saw a sharp rise in miscarriages and stillbirths; but it was only after 9 years that the US medical experts acknowledged that the children were particularly prone to thyroid problems and the seriousness was highlighted when a 19-year-old boy who had been the youngest to play in the 'snow' died of leukaemia. Women from Rongelap continue to give birth to what they describe as "a bunch of grapes"—a consequence of radiation exposure because of which cystic grape like structures occur in the uterus or sometimes a single hydatiform mole is formed from a fertilised ovum which has lost its nucleus.

The peaceful atom too was beginning to show its belligerence—the increasing health problems of nuclear workers—the uranium miners, the transporters, reactor operators and the whole army of workers—was forcing several nations to pass legislations. But this also led to successful efforts to formulate so-called safety standards which only obliterated the real effects of radiation damage.

It is interesting here to point out that the international bodies which are supposed to set the limits of exposure and monitor it are themselves open to criticism of bias. Moreover, even as evidence accumulates about the extensive and long-term damage due to nuclear operations, the levels of exposure etc have been revised and concepts modified to accommodate them. For instance, it is now accepted that there is no safe dose of radiation; therefore the 'permissible dose' was evolved. And ironically enough it is not the health establishment which has traditionally been involved with monitoring these aspects; the discipline called health physics which evolved at around the time of the first nuclear reactor has been dominated by physicists and engineers and its fundamental concern has been to give the nuclear industry a clean chit. (See page 119 for discussions on the biases in concepts of 'risk' and safety'.)

Anti Nuke Debate

It is pertinent to ask why a debate which has been going on for over three decades needs to be given space and attention here. There have been several developments in the past few years about which we can neither remain unaware nor unconcerned. For one thing after four decades of the arms race the US and the USSR are on the verge of reaching a historic agreement on dismantling nuclear weapons in Europe. If the agreement on dismantling intermediate range missiles in Europe whatever its limited scope comes through it will be the first ever of its kind. Undoubtedly, national and global economic and political considerations have had a lot to do with the move, with the growing European peace movement, which is itself another manifestation of these considrations, providing a motive force. The growth of the peace movement cannot be measured only in terms of numbers but in terms of its political effectivity. One consequence of this has been the incorporation of many of the anti-nuke movements, demands into the programmes and manifestos of opposition parties in Europe. While the Green party has gained ground in West Germany in the last election, in Australia and Iceland too parties with a major focus on anti-nuke and peace issues have contested elections and won parliamentary representation. The communists in France are actively participating in anti-nuke demonstrations, for the country has continued to conduct nuclear tests in the Pacific despite worldwide protest. At Greenham Common, UK women have been camping outside the defence area in protest aganst the deployment of Cruise missiles.

In the Pacific too, several nations have come together to declare the zone a nuclear free one with many countries, including the USSR and excluding the US ratifying the declaration. Not the least of these new developments has been the spectacular impact of the International Physicians for the prevention of nuclear war (IPPNW) (See p 111)

But closer home a vocal nuclear lobby is pressurising the Indian state into giving the final signal to produce the bomb which is supposedly all but ready. Moreover the nuclear industry is planning the biggest expansion programmes, with a target of 10,000 MW of power from nuclear sources. Capitalist development in India poised to shift gears to a more rapid growth which will inevitably make demands for changes in the economy. The atoms-for-progress-and-peace theme is acquiring new meaning. Acquiring nuclear weapons capability not only becomes necessary as deterrance 'to keep peace' in the region, but also to reassert hegemonic aspirations. At the same time nuclear power with its long-term advantage of low labour inputs, centralised control etc is seen as the only means of providing for the power requirements of industrial growth.

Thus the nuclear debate has both a global and a national dimension and within this broad perspective are several issues. There is on the one hand the issue of how we view war, nuclear armament and disarmament at the global level as well as the national. Recent marxist analyses of war see it mainly as a condition of capitalist production. They argue that highly industrialised capitalist economies generate surplus value at such a rate that capital begins to accumulate rapidly and this inevitably leads to falling returns of investment thus leading to crisis. The creation of defence establishments which must be kept ready to strike at all times in terms of training, competence and technical superiority provides for vast capital expenditures in a justifiably non-productive fashion—ie without creating new value. Seen in this light the theory of deterrance, whether it is in terms of keeping huge conventional military establishments or building up nuclear armaments and deploying them becomes a conditions

of capitalist production.

In the context of international capitalist development it is absurd to take one view of war and armament on the global level, i e, support disarmament efforts, while at the same time take a completely different view at the national level, i e, support the bomb lobby encouraging nuclear arms production.

Equally, it would be utterly naive and blind to try to delink the nuclear arms issue from that of nuclear power. Setting up a nuclear capability for producing 10,000 MW power is equivalent to establishing the base for producing a full complement of nuclear weaponry. But for the moment let us assume that it is possible for us to seperate the two. Would nuclear power be a feasible and safe proposition then?

It is important here to point out that India has been active on the peaceful nuclear front at every level of the nuclear cycle. Uranium is mined in the country; this ore as well as other fission materials can be processed and enriched, albeit to a limited extent according to official sources; we have several reactors which even if they have never been working efficiently to produce power for which they were ostensibly set up they have been producing fission products in large quantities and huge quantities of radioactive waste; India has had a sophisticated reprocessing facility for almost as long as it has had its first power reactor and it has had to store the long and short half life wastes in many dumps.

There is today enough information worldwide to show how workers and "non-workers in and around these various nuclear establishments are being permanently affected by radiation damage. Indian studies (see p 124) have shown just how incapable the department has been in monitoring the health of workers in the Rare Earths plant at Alwaye in Kerala one of the oldest such plants in the country. Since the 70s several stories of how workers are exposed to high radiation doses during cleanups have reapetedly surfaced from Tarapur and Rajasthan. The department has kept on record of people around any nuclear installations; but recent studies in UK have shown a definite possibility of childhood leukaemia clusters around power plants and no significant contraditions have as yet come forth despite close scrutiny of the studues. And nobody is aware of where the nuclear waste dumps are which is classified information under the Atomic energy Act Government control.

In fact the Act which vests extraordinary powers with the state is perhaps the most draconian of legislations in the country. It permits the nuclear industry to get away with criminal negligence of the most basic safety norms. And yet quite amazingly, it has, by and large escaped criticism—the Parliamentary opposition has never made an issue of demanding a review of the Act.

And then there are two other issues—one of the possibility of accident at a nuclear facility and the other of 'retiring' old plants. It is clear now that Three Mile Island and Chernobyl, the two publicly known nuclear accidents are not specific and rare instances—they can occur at any point in the nuclear cycle, no matter how fail-safe the process. The secrecy which is part of any nuclear establishment anywhere in the world makes it impossible to ensure the safety of populations around. Only in the last decade has the issue of what to do with old nuclear plants received attention. The dilemma is that firstly, the expenses involved in shutting down are enormous, secondly a nuclear plant unlike other establishments cannot simply be abandoned it is in the nature of a time bomb because it will be radioactively 'hot' for a long-time and has therefore to be safeguarded and thirdly in the bright dawn of the nuclear era nobody had thought to make provisions, costwise or otherwise about dismantling these monsters.

But notwithstanding all this there is yet another facet of the picture which demands attention. Atomic energy has not only produced electricty but a variety of nuclear products used in a range of applications, particularly in medicine. There can be no denying the fact that the use of radioisotopes have enormously benefitted biomedical and engineering sciences and there is no substitute for radiation therapy with all its drawbacks and problems. While it is true that the technology to produce them may be different, can it not be argued that this is in many senses a matter of scale? Can we seperate this from the rest of the issue and would it be possible to confine all future applications, research etc only to these areas. Can scientific developments no matter what their impetus and the predetermined boundaries of growth, be entirely contained?

The Indian anti-nuke movement has been of fairly recent origin—but it has already made considerable impact on an establishment, which for the first time has been forced to give serious consideration to sensitive questions. But the medical establishment, has in keeping with its class interest kept out of the picture.

However, if health is our everyday concern and if we believe that health care in more than medicare and is a political issue, we have to confront the nuclear issue. For, in doing so, we confront in quintessence, the contradictions and consequences of world capitalism.

Padma Prakash

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Medical Response to Nuclear Threat

IN 1961, a group of young physicians from Boston founded an organisation called Physicians for Social Responsibility (PSR). Among them were Bernard Lown, Jack Geiger, Victor Sidel and Sidney Alexander. Beginning with an historic article in the *New England Journal of Medicine,* they calculated and publicised the medical consequences of a nuclear weapon detonated over a major city.

After a period of dormancy, PSR was revived in 1978 by another group of young Boston doctors, including Helen Caldicott, Eric Chivian and Ira Helfand. The organisation was concerned with both nuclear weapons and nuclear power, and developed a national constituency in the wake of the accident at the Three Mile Island nuclear reactor in Pennsylvania. In the following year, PSR decided to focus its attention on the nuclear arsenals. Dr. Chivan, a psychiatrist at the Massachusetts Institute of Technology and Harvard Medical School, agreed to design and organise the first major American conference on the medical consequences of nuclear war.

At the same time, Dr. Lown and several other American physicians, including Harvard Medical School professors Dr. James Muller and Dr. Herbert Abrams, began discussing the possibility of a Soviet-American medical dialogue on nuclear war. Dr. Muller had studied cardiology in the Soviet Union and later visited there on official delegations. He and Dr. Lown agreed there should be some kind of joint effort by Soviet and American physicians to address the nuclear arms race. Together with Dr. Abrams, chairman of the radiology department at Harvard, they formulated a strategy for approaching Soviet colleagues.

One key element of that strategy was the personal and professional relationship between Dr. Lown, a professor of cardiology at the Harvard School of Public Health, and Dr. Evgueni Chazov, director of the USSR Cardiological Institute. The two had first met in 1966.

Late in 1979 and early in 1980, Dr. Lown wrote to Dr. Chazov with a proposal to create a Soviet-American physicians' movement to prevent nuclear war. The proposal reasoned that doctors owe a professional duty to address the greatest threat to human life, and that an East-West medical organisation would be particularly effective in alerting the public and persuading governments.

In April 1980, Dr. Lown travelled to Moscow to ask Dr. Chazov to urge his Soviet colleagues to join such an effort. Dr. Chazov was encouraging, and in the spring of 1980, Dr. Lown, Dr. Abrams, Dr. Muller and Dr. Chivian incorporated IPPNW as a non-profit, educational organisation.

The efforts of the Boston physicians led to a meeting in December 1980 in Geneva between three American doctors and three to lay the international foundations of IPPNW.

Soon after, a small group of US physicians assumed the task of transforming the concept of IPPNW into an organisatioal reality. Their initial assignment was to organise the First World Congress of IPPNW. The Congress, held near Washington D.C. in March 1981, attracted 70 doctors from twelve countries.

In the eyes of the western press, the dramatic news from the First Congress was the presence of the Soviet delegation. When Soviet doctors joined their American, European, and Japanese colleagues in calling upon Presidents Reagan and Brezhnev to preclude the use of nuclear weapons "in any form or on any scale", the Congress achieved a major goal of the IPPNW founders—demonstrating to the world that American and Soviet physicians could co-operate on the gravest public health question of the time. This fact was under-scored by the widespread coverage given the Congress by Soviet press and television.

Soon after the First Congress, the American Medical Association, after reviewing material submitted by IPPNW and its US affiliate, Physicians for Social Responsibility, passed a resolution which recognised the professional obligation of doctors to educate their patients on the medical effects of nuclear war. The basic message of IPPNW's founders had entered the mainstream.

[Central Office: IPPNW, 225 Longwood Avenue, Boston, Mass 02115, USA.]

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The reasons have been mainly technical and financial. But we are generally out of the woods and would be much more confident if we are assured of your continued support! So please do renew your subscriptions.

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One of the major objectives of the journal was to bring to readers material, opinion, debate and analyses, not easily accessible to activists and which would enrich and enlarge the marxist understanding of health. We believe the RJH has made significant contribution in the area and will continue to do so. We collectively recognise the political necessity of such an endeavour. No matter what the odds, RJH will continue to be published. We appeal to you to help us in whatever way you can.

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Anatomy of Nuclear War

achin vanaik

The date August 6, 1945. The Place - Hiroshima, Japan.

"NO one could understand what had happened. Thousands began to flee the city. Most of them seemed to be hurt or mained. Eyebrows were *burned* off, skin was hanging from faces and hands. were vomiting. Almost all had their heads bowed, looking straight ahead, were silent and shared no expression whatsoever. In general, survivors that day assisted only their relatives or immediate neighbours, for they could not comprehend or tolerate a wider circle of misery.

Towards evening the streets became quieter; "Now not many people walked in the streets but a great number sat and lay on the pavement, vomited, waited for death and died." Even now there was no organised help masses were dead, masses were dying. "They all felt terribly thirsty and they drank from the river. At once they were nauseated and began vomiting and they notched the whole day." There were a few people who were capable of helping others. Survivors that evening noted that the asphalt on the streets was still too hot to walk on with comfort. Two men noticed "a pumpkin was roasted on the vine", which was eaten. Potatoes under the ground were found to be baked and were gathered for food. Many desperately ill survivors found their way to the sand pits on the river deltas. The tide was coming in. Many were too weak to move themselves but were helped by exhausted survivors. "He reached down and took a woman by the hands, but her skin slipped off in huge glov-like pieces." Others were moved up the sand pit but the following morning they had gone as the tide had came higher than expected.

During the first day, Father Kleinsorge was asked to help some soldiers. "When he had penetrated the bushes, he was there were about 70 men and they were all in exactly the same nightmarish state; their faces were wholly burned, their eye sockets were hollow, the fluid from their melted eyes and run down their cheeks. This was the result of having their faces upturned when the bomb exploded." (Based on the book *Hiroshima* by John Hersey).

Not long afterwards during the Korean War, the American Pentagon devised what it called the 'Hiroshima Death Function' (HDF) to calculate what would be the effect of using nuclear weapons in a selective manner. This HDF was an algorithm to calculate mortality as a function of distance from ground zero of an airburst nuclear explosion. The HDF is

$$D(r) = 0.93 \text{ Exp } -\{0.693 \quad [(r - 800)/850]^2\}$$

where D = Deaths and r = slant distance in yards from point of burst for r greater than 800.

Despite the evil of nuclear weapons and the widespread revulsion at what happened in Hiroshima and Nagasaki, the contingent use of nuclear weapons has never been far away from the minds of nuclear warmongers. Certainly, these warmongers have few doctors or medical practioners in their ranks. Most of them are defence personnel, politicians, strategists, academics and so on. But how many medical practioners are aware of what a nuclear war means? And how many are actively opposed to such a war breaking out and to the nuclear weapons powers or potential nuclear weapons powers army themselves with such weapons?

Today, with the "live" experience of Hiroshima and Nagasaki a great deal is known about the medical consequences of a nuclear attack. A nuclear bomb explosion involves blast effects, heat effects, and the effects of ironising radiation. The proportions of these effects can vary depending on the size and nature of the bomb. For example, in the neutron bomb (the 'capitalist' bomb which kills people but does not damage property) the blast and heat effects are greatly minimised while the radiation effect is greatly enhanced. But in the 'normal' nuclear explosion, some 50 per cent of the energy goes as shock waves or other blast effects, 35 per cent as heat and 15 per cent as radiation. The range of these effects will be different if the bomb bursts in the air blast and heat range will be greater) than if it bursts on the ground (radioactive deaths, fall out etc, will be greater) or whether it explodes underground or underwater.

A sufficiently high overpressure (blast effect) on the human body will lead to rupture and haemorrhages in the lungs, air embolism and rupture of the gut and ear drums. In addition blast effects on buildings etc, will indirectly create many more human casualities through flying projectiles and falling debris etc.

The fireball of a nuclear explosion (small one) will look brighter than the sun at noon to anyone within a 50-mile radius of the explosion. To anyone looking at the fireball there is great likelihood of retinal burns leading to permanent blindness. The intense heat of such a fireball will raise flash burns of the skin. A partial thickness burn leads to blistering which can became infected. A full thickness burn is where the skin is completely destroyed. In both cases loss of crucial body fluids through the surface of the burn can lead to death. In addition, the explosion will create fires on the ground leading to flame burns which will cause lung damage through inhalation of smoke from a variety of burning materials especially plastic.

After a nuclear explosion comes the radioactive fallout as radioactive isotopes condense on debris and dust to produce the radioactive dustcloud. In the first 24 hours some 60 per cent of radioactive products fall to the ground. This is the early fallout. The 40 per cent which remains can take much longer to fall and can be dispersed over a wide area depending on weather, winds etc. This is the delayed fallout. This radiation causes damage to rapidly dividing cells such as those of bone narrow and the lining of the gastrointestinal tract. When the whole body is exposed one can get radiation sickness which is often fatal. One unit of dose i.e. energy absorbed per unit mass is called a rad and a dose of 450 rads will kill 50 per cent of young, fit adults. A dose of 150 rads will kill 50 per cent of elderly, already ill and children

In the first form of radiation sickness/the bone-marrow

form requires only an exposure of 150 rads. The first symptoms are lethargy and nausea, then nothing for 10 days. Towards the end of the second week there is maximum depression of the white blood cells and platelets which reduces the blood's capacity to clot and stop bleeding or protect against infection. Spontaneous haemorrhages often develop. By the fourth week many of the victims will die.

If the radiation exposure is high enough then there will be gastrointestinal damage where the cells of the small intestine are damaged. This leads to massive diarrhoea with loss of body fluids, to greater risk of getting septicaemia from bacteria emerging through the damaged living. If exposure is higher still, then the central nervous system of the body is damaged leading to convulsions, coma and death in a few hours. If the victim survives, there will be gradual loss of mental and physical faculties which then results in death in a few days.

Where radiation sickness does not lead to death, it can destroy or damage fetuses in pregnant women. Brain damage was found in many children whose mothers were less then 15 weeks pregnant in Japan when the bombs fell. Small skulls (microcephaly) occured in 44 per cent of surviving children and 16 per cent were severely mentally retarded. The fregnancy of stillbirths and post-natal infant deaths rose dramatically.

The longer term effects of radiation through delayed fallout affect those not directly affected by the explosion. In these cases, radioactive isotopes are ingested through contaminated foodstuffs and fluids, by inhalation and occasionally through the skin. Radiation-induced cancers apart from leukaemia (which occurs more quickly) can emerge after a latent period of 20-25 years. Genetic abnormalities and defects can take a number of generations before emerging since gene nutations are recessive.

Even a single bomb of the kind used on Hiroshima and Nagasaki would completely overwhelm medical resources. Quite apart from the psychological damage or the direct/indirect effects of the explosion, there would be a great deterioration in public health standard with sanitation facilities wrecked and incapable of coping with sewage clearance, providing clean drinking water and so on. Thus diseases like dysentry, infectious hepatitis an salmonellosis would be promoted. There would be diseases of overcrowding, meningococcal meningitis, diptheria and tuberculosis, diseases associated with dirt and vermin such as typhus and in Indian conditions, even plague. Common infections like pneumonia and septicaemia would become killers.

All this would be the effect of a few explosions. The effect of a nuclear war is simply unimaginable. The indirect effects would be far greater then the direct effects and impossible to calculate. As far as the environmental damage e.g to the earth's ozone layer, leading to worldwide and devastating ecological damage e.g. freezing of the temperate regions, submergence of large land masses under water, destruction of a large part of the world's agriculture, excessive ultraviolet radiation as atmospheric protection is eliminated—these are all part of what is now called the "nuclear winter" scenario which could become a reality even if there was a "limited' or "small" nuclear war in a remote part of the world.

In sum for *purely* medical reasons *alone*, nuclear war must never be allowed to occur. No government should contemplate it and it should never be allowed to happen no matter what the circumstances.

Why Nuclear Arsenals?

Why then do countries go in for building nuclear arsenals? Why then the insane nuclear arms race between the superpowers? Why then the attraction that going nuclear has for bomb lobbies in countries like India and Pakistan, which have nuclear weapons capability but have not as yet crossed the nuclear rubicon of openly deploying a nuclear weapons system?

Nuclear war is mind-boggling but precisely because it throws into the dustbin older preconceived notions of war and its possible purposes, so many governments revert back to older forms of thinking in order to cope with the mind-boggling character of nuclear weapons. That is to say, these governments or these nuclear politicians or nuclear strategic experts try to treat nuclear weapons in much the same way as they try to treat and cope with conventional weapons—they try to make nuclear weapons into *viable instruments of a country's foreign policy.* Since the uncontrollable dimension of nuclear weapons means that the use of nuclear weapons for political purposes is not viable (what possible political purpose can be justified by the use of such weapons?) what has become viable is not the use but the tnreat of its use. This is want is called deterrence. Having nuclear weapons becomes a way of assuring nuclear peace. Despite the universal character of nuclear weapons—its universal effects and the universal horror at its use—this way of assuring nuclear peace is not the least universal in character or orientation but is strongly nationalist. Deterrence becomes a way in which a nation prevents nuclear war breaking out between itself and another nation having nuclear weapons by *intimidating* it. Thus the foundation of nuclear peace is nationalist intimidation and distrust.

The great importance given to deterrence is ultimately a reflection of the bankruptly of those who have power in our societies. Nuclear weapons, as Einstein pointed out, should and must lead to a new way of thinking among human kind. Instead, very little has changed in the thinking of power elites. The best way to have nuclear peace say our tough-minded "realists" is to prepare for a nuclear war. What is more, if deterrence is to be credible, the possibility of a nuclear war at least a retaliation of nuclear attack must also be real. Thus, when governments say they do not believe that there can be any circumstances which justify the launching a nuclear weapons, they are either wilfully lying or caught in an insoluble contradiction. If nuclear deterrence for a country's government is to be meaninful and credible, its willingness to launch nuclear weapons must be real in certain circumstances.

Deterrence, then, is a justification for the proliferation of nuclear weapons. There is both horizontal proliferation (more and more countries becoming nuclear weapons powers) and vertical proliferation (the superpower arms race

and the other weapons powers adding to their nuclear arsenals). Both kinds of proliferation must be curbed. Such has been the insane logic of deterrence that both superpowers in the name of "national security" and "deterring the enemy" have embarked upon such a fast moving escalator of arms development and deployment, that both of them have enoromous "overkill" capacities. The end result of this search for nuclear security "has been ever greater insecurity vis a vis each other, and for the world". This is the historical balance sheet of all these years of nuclearly arming in order to keep the nuclear peace.

Finally, with the coming of Gorbachev in the USSR, there seems to be a chance (after three and a half decades of complete barrenness) of the possibility of the superpowers agreeing to a partial and limited disarmament in Europe. But if there is to be an escalating momentum of disarmament then public pressure and mass mobilisation on issues of disarmament must be maintained. The dangers of a new and more dangerous escalation of the arms race in space (star wars) is very much there. There is a vicious circle between the two superpowers that must be broken by external forces such as mass peace movements impinging themselves on the Kremlin and the White House. The superpowers keep on nuclearly arming themselves because they don't trust each other; they don't trust each other because they keep on nuclearly arming themselves.

For various reasons, however, the biggest danger of a nuclear war is not in Europe or the USA or Russia but in the third world where a nuclear war between the superpowers might erupt as a result of an escalating conventional war between allies of both superpowers e.g. in the Korean peninsula between north and south. Incidentally in the demilitarised zone, there are atomic mines and tactical nuclear weapons are available to the American-backed forces of South Korea.

Furthermore, rival countries with a history of mutual antagonism, such as India and Pakistan could also develop nuclear arsenals which would greatly add to the terrorism that already exist. There is already an ever growing lobby in this country demanding that India go in for the bomb now that there is growing evidence of Pakistan having a "bomb in the basement" with the "last wires unconnected". What this lobby wants other people to forget is that India exploded its bomb in Pokharan in 1974 and very likely has its own "bombs in the basement" with the "last wires unconnected". But having some bombs in the basement and openly deploying and progressively expanding one's nuclear weapons system are two different things. It is still possible to step back from the brink as far as avoiding a regional nuclear arms race is concerned. There are thus two levels at which the struggle for disarmament must continue—the global and the regional levels. One must endeavour to halt and reverse both vertical and horizontal proliferation. In the case of India and Pakistan the safest thing to do is not to get into an arms race in the first place i e to mutually abstain from going nuclear. This is what the establishment of a Nuclear Weapons Free Zone (NWFZ) in South Asia would mean. Of course, such a thing is feasible only if both countries want it, whether for the same or for different reasons. Pakistan has expressed its willingness to consider such a zone if India would, because Pakistan equates itself with India and realises that the burden of maintaining "balance" on a constantly escalating regional nuclear arms race would be much the greater fot it. Thus it is in its self-interest and not because of altruistic or "peace-loving" reasons that Pakistan is willing to jointly foreclose the nuclear option.

But India and its bomb lobby is not willing to accept such an "insulting" equation between itself and Pakistan. Thus it is opposed to such regional steps at denuclearisation preferring to argue that unless there is a halt to decline in vertical proliferation of nuclear weapons, there won't be a halt or reversal of horizontal proliferation. This is wrong. Both kinds of disarmament efforts must be pursued and expanded. Limited and partial efforts at disarmament at one level help such efforts at the other level. Both India and Pakistan should forego the nuclear option so that tensions between the two will never threaten a holocaust.

What about "nuclear blackmail" then by other weapons powers? This is a false question. There are three countries that might practice such blackmail. In the case of USSR and USA, the disparity between them and India, even if the latter had a rudimentary weapon system deployed is so great that there is no adequate nuclear riposte or counter threat to nuclear "blackmail" by the superpowers. It is not enough to have a few piddling bombs or missiles. India would have to have a much more powerful and "credible nuclear deterrent" against the superpowers, which it can never have. This is not to say that either the USA or USSR can easily nuclearly blackmail others. In fact one of the biggest problems with nuclear weapons is that their unique nature makes it almost impossible to use them effectively as political weapons. For example, how does the USA use its nuclear might to down Nicaragua and Cuba?

So the only other country from which India might have to fear "nuclear blackmail" is China, which has never been tempted to try any such uncertain process. To establish a "credible deterrent" against China, India would have to embark on a crash programme of nuclear weapons development to make up the 15/20 year technological and deployment gap between the two countries as quickly as possible. Success in such an endeavour is by no means assured. But what can be assured is that such Indian efforts would greatly perturb China and make it more willing to consider nuclear action or the threat of it against India. Such a move would also lead Pakistan to try and nuclearly "match" India and thus enhance the momentum of a regional arms race. There would be greater interaction distrust and histility and above all, greater nuclear insecurity for the countries in the region—more and more insecutiry in the name of the search for security. Nuclear security has to be a *common security* based on the virtues and strengths of disarmament not armament. It is the search for ways to disarm that hold the promise of a safer world not the search for how to use nuclear weapons in the service of national real politic. The greatest tragedy of the nuclear era is the contradiction between the regionalisation/internationalisation of effects and dangers of nuclear war and nuclear arms races and the nationalised

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Health Hazards of Nuclear Cycle

manan ganguli

RADIATION is dangerous. Exactly how dangerous even experts are unsure. The more we learn about it, the more we become aware how greatly the hazard has been underestimated in the past. Karl Morgan, a founder of the health physics profession in the United States, stated, "... there is no safe level of exposure and there is no dose of radiation so low that the risk of a malignancy is zero" in *Bulletin of Atomic Scientists*, September 1978 issue. He further admitted that earlier theories of radiation effects underestimated the damage now being suffered in human populations.

Until 1934, the safe level of radiation exposures permitted to workers in radiation-related occupations was assumed by the scientists to be 52 rems per year. With the growth in understanding of the harmful effects, the level of permissible radiation dose has continually dropped. In 1934, the safe dose for the workers became 36 rem; and in 1950, a new exposure level of 15 rem per year was recommended by the International Commission on Radiological Protection (ICRP) which in 1957 reduced the exposure limit to the current level of 5 rem per year for a worker. However a double standard operates for nuclear workers and for the public—a maximum of 0.5 rem per year for any individual member of the public. And contrary to so much new research that has documented the harmful effects of current permissible exposure levels, ICRP in 1973 has recommended an increase in radiation exposure levels.

In this article, I shall explore the nature and effects of radiation especially low levels of radiation and its relation to nuclear technology.

Radiation and Radiobiology

Everything in the universe is composed of elements—the smallest particle of an element is an atom. The majority of these elements are stable, i e, they do not transform into their elements. Some atoms are unstable and emit particles and energy to transfrom into newer elements until they have changed to a stable form.

An atom consists of a central nucleus which contains almost all the mass of the atom and which is positively charged; and a surrounding cloud of planetary electrons of very little mass which are negatively charged. Normally an atom is electrically neutral and there is an exact balance between the central positive charge and the surrounding negative charge. The central atomic nucleus consists of two kinds of particles—protons and neutrons—both are very nearly of the same mass but protons have positive electrical charge whereas neutrons are electrically neutral.

Between neutrons and protons in close contact, there are very strong forces which are capable of binding them together into a stable nucleus. The stability however depends upon a rather precise ratio of neutrons to protons. If there are too many or too few neutrons the nucleus will be unstable and will remedy the situation by spontaneously changing the ratio. This can be done in the following ways.

There can be emission of a chunk of nuclear matter called particle which consists of two neutrons and two protons and in so doing the nucleus loses two positive charges. This is radiation.

Alternatively, the neutron can spontaneously change into a proton or vice-versa. In order to conserve electric charge, a P-particle is emitted which consists of an electron (if a neutron becomes a proton) or its positive analogue, a positron (if a proton becomes a neutron). This is B-radiation.

There can also be r-radiation which is a high energy electromagnetic radiation similar to x-rays. As we have seen, a substance containing unstable atoms may emit, B or r radiation by which the radioactive atoms approach stability and the process is referred to as radioactive decay. This is independent of all physical and chemical circumstances and is measured by its physical 'half-life' i e, the time in which one half of the atoms will decay. The half-life may be fraction of a second or it may be millions of years.

This spontaneous transmutation from a less-stable to a more stable state releases energy which is used in propelling the x or B-particles with considerable speed. Being electrically charged, these high speed particles interfere with the electron clouds of atoms through which they pass and change the electrical charge of the atom within a cell by disrupting its structure. This is ionisation.

We cannot sense radiation, it is invisible to the naked eye, we cannot touch, smell or taste it. But a chaotic state can be induced within a living cell when it is exposed to ionising radiation. With the sudden influx of random energy and ionisation, there may be cellular death or varying degrees of damage. This damage can be temporary or permanent.

The delicate but fantastically organised chemical substances in the biological cells can be subjected to a wide variety of types and degrees of injury. Here I shall only enumerate some major consequences. The most catastrophic result which the human body experiences in one generation is probably cancer. The cell nucleus (its store of genetic information) is damaged but the cell survives and multiplies in its perturbed form over a number of years and forms a group of cells that eventually appears as cancer. What happens between the initial radiation injury and the ultimate appearance of a cancer is still a mystery the identification of which is contemporary biology's major challenge.

Damage to Somatic Cells: Chromosomes of the cell nucleus are the targets of ionising radiation. They are considered to carry all the information to control cellular activities like growth, cell division and production of biologically important chemicals like enzymes, hormones. Ceres are the units of information within the chromosome and are composed of DNA. If the ionising radiation displaces one of the electrons in the chemical bond of DNA or RNA, there will be alteration of information-carrying chemical structure in a single gene which in turn misdirects the activities within a cell. There can be abnormal and unregulated cell-division which will produce cancer or leukaemia.

Rapidly dividing cells are more vulnerable to radiation damage. Thus an embryo or foetus suffers most while developing in the mother's womb and may be born with congenital malformation. The cell may start producing a slightly different hormone or enzyme than it was originally designed to produce which in turn may produce millions of such altered cells. This can have many adverse effects on the body such as hastening the aging process, lowering resistance to disease and precipitating psychological stress.

Damage to Germ Cells: It has even more far reaching consequences and may be transmitted to all future generations. We are probably fortunate if the damge to the sex chromosomes is such that they fail to fertilise or if fertilised the unborn baby is miscarried. But with the low level ionising radiation, we are more unfortunate. The health effects upon new generations, carried through mutated genes of human sex cells, are far more serious and pose a maddening threat.

Genetic mutations occur due to natural sources of radiation and other known and unknown causes. They form an equilibrium of beneficial and detrimental genes in the human genetic pool. Indeed, some mutations may be beneficials, but the prevailing genetic opinion indicates that any increase in the mutation rate will create a great deal of human suffering in new generations with serious physical and mental diseases. The detrimental genes if dominant are removed quickly through early death and if recessive will remain indefinitely in the genetic pool affecting generations after generations until they gradually disappear.

Geneticists and medical experts are today of the opinion that major serious human diseases like diabetes mellitus, atherosclerosis and associated heart diseases, rheumatoid arthritis, schizophrenia are genetically determined. They are known now as multigene diseases which comprise over 50 per cent of all diseases compared to earlier single-gene rare diseases like haemophilia, sickle-cell anaemia, cystic fibrosis, etc.

Sources of Radiation Pollution

There are several sources of radiation artificial and natural. In this context, the anatomy of the nuclear fuel cycle will be dealt with to understand this greatest problem of environmental pollution. Yet, other sources of radiation have to be considered with equal seriousness.

Background Radiation: Genetic disorders, diseases and deaths caused by natural radiations are no different from those caused by artifical radiation. It is estimated that 5-10 per cent of diseases due to genetic mutations are by natural radiation.

Cosmic rays from outer space and ultra-violet rays from the sun still penetrate through the present thick ozone layer of the atmosphere though it is much less than what it used to be in the past. They are gamma radiation in nature. Then, some rock strata in the earth containing uranium, radium, carbon-14, etc, release natural radiation and show high incidence of health problems in those areas. The connection between high natural radioactivity of coastal Kerala and higher incidence of Down's Syndrome in that state is well known.

Medical X-rays and Radiotherapy: This diagnostic and therapeutic procedure is one of the artificial sources of gamma-radiation. X-rays emit low level radiation, yet they are not any more considered safe. They have been several studies which have established the connection between X-rays and leukaemia, cancer and other health problems. Drs. Irwin Bross and Rosalie Bertell, analysing X-ray data of 13 million people in three states in the USA, have shown that there is significant genetic damage, large increases in leukaemia and increased susceptibility to infectious diseases as a result of relatively low doses of radiation.

Nuclear Weapons and Test Fall-Out: A 15 kiloton uranium-235 bomb was dropped in Hiroshima in August 1945 killing between 80,000-200,000 people followed by a plutonium bomb over Nagasaki with similar results. Within five years there were increases in leukaemias, cancers and mutation-induced medical disorders from radio-active fall-out. These continued to appear even 22 years after the Hiroshima-Nagasaki bombing. Without going into today's picture of nuclear weapons, it is worth noting that fall-out from test explosions by USA, USSR, France and other countries has polluted the environment with radio-active materials to such an extent that it is comparable to several Hiroshimas all round the globe.

Nuclear Industry and Radiation

The nuclear industry is the major source of artificial radiation which will be polluting our environment for many thousands of years. It is not only the reactor but the whole chain beginning from mining to fuel fabrication to reprocessing of spent fuel and waste disposal that is tremendously dangerous and there is no way of keeping the workers and the public out of radiation exposure even with the normal running of the fuel cycle. It is worth noting here that there is no safe level of radiation exposure.

Mining and Milling: The fuel cycle begins with the mining of uranium where uranium ore is extracted from the rock strata by open cast or underground method. In this process, radium-226 and radioactive gas, radon-222 which are alpha emitters are released. Radon has very short half-live (3.8 days) and is extremely radioactive and when inhaled causes lung cancer. American Indians in USA, black Africans of South Africa/Namibia, aborginal Australians, farmers in France and weaker sections in other countries have been affected most having not only been driven off their land but also having to live near these dangerously polluted mines and by working as miners.

Though the high probability of lung cancer deaths among the uranium miners was well known for a long time, no studies had been conducted until recently. Safety standards and miners' health have been neglected; compensations were denied and experts from the AEC (US) even testified that radon gas levels in the uranium mines were below a threshold level for human health damage! According to US Public Service 1978, out of 100 uranium miners being monitored from one uranium mine in New Mexico, 25 have already died of cancer while still in their forties, and a further 20 are suffering from cancer. In the report of the Australian Atomic

Energy Commission, 1975, the incidence of leukaemia/cancer among white Australian miners has been found to be six times the expected norm.

With the tragic consequences of radon gas and after many unnecessary miner deaths from lung cancer, only in 1967 were safety standards and improved ventilation of the mines introduced in US mines. Yet the uranium mining standards are not and cannot be sufficiently protective of the miner's health.

In the process of milling, i e, crushing the ore finely to extract uranium, radon gas is again released affecting the health of the workers. Milling results in vast quantities of radioactive waste products—tailings—dumped beside the mills without sufficient care. Air, surface water and the ground water are contaminated by the radon gas, radioactive particles and some highly poisonous heavy metals like mercury, lead, arsenic in the tailings. Ironically, in Colorado, they were once used as landfill or building materials for homes, schools, roads, hospitals and an airport. We have very little knowledge about the state of our uranium mine at Jadugoda, Bihar. Proper epidemiological study and health monitoring of the mining community by a team of medical experts, biologists an geneticists is of utmost importance.

Enrichment and Fuel Fabrication: For the fuel of light water reactor (like Tarapur plant), uranium ore has to be enriched to increase the content of uranium-235 by approximately 3 per cent. The process is complex, expensive and uses enormous amounts of energy. There is routine releases of radioactivity to the environment; nonetheless, solid liquid and gaseous wastes are created in huge quantity. Increases in leukaemia rates have been reported in the communities around the enrichment plants. We'll discuss the problem of nuclear waste separately.

Once uranium has been sufficiently enriched, it is sent to a fabrication plant where enriched uranium is assembled into fuel rods for reactor. During the fabrication, there is routine release of radioactivity affecting workers and to the atmosphere permitted as 'acceptable' limit.

Nuclear Reactors: A tremendous amount of heat is generated from the fission of fuel rods and this in turn generates electricity from a steam turbine as in a conventional power station. Nuclear reactors are thus a very complicated and expensive means of boiling water. Apart from the serious radiation pollution, there is thermal pollution and damage to ecological balance as two-thirds of the heat is discarded into the environment. A range of radioactive elements is produced of which only few like iodine-131, cesium-137, strontium-90, plutonium-239, are considered in the discussions.

Reactors are constructed with multiple barriers in order to keep the radioactive release as low as possible and within the containment building. Yet with the stress of heat and pressure, splits and holes occur allowing radioactivity to escape. In addition to occasional serious accidents, there is routine release of vast quantity of radioactive waste from the nuclear reactors. Of the radioactive elements produced in a nuclear reactor, plutonium is the most toxic with a long half-life of 24,000 years. Single particles weighing one-millionth of a gram, so small that they can only be seen under a microscope, can cause cancer of the lung if inhaled. Apart from causing cancer, it is concentrated by the testicles and ovaries where it will inevitably cause genetic mutations which will be passed on to future generations. Yet each operating nuclear reactor produces between 400 and 600 pounds of plutonium each year in its normal operations. Strontium-90 chemically resembles calcium and is absorbed by bones and causes bone cancer and leukaemia, Dodine-131 concentrates in the thyroid gland to cause thyroid cancer.

There have been several studies by the radiation research scientists and medical experts to evaluate the hazards of radiation at the workplace. Perhaps the most extensive study yet undertaken was that of Thomas Mancuso of the University of Pittsburg at the Hanford Atomic Works in USA. This study was independently analysed and assessed by Alice Stewart and her assistant George Nkeale, a mathematician. Stewart, a medical expert from Birmingham, had first documented the health effects of low level radiation of medical X-rays on the human foetus. Mancuso-Stewart-Nkeale study evaluated astonishing results of cancer and other radiation related hazards of Hanford workers; and US authorities terminated Mancuso's funding for follow-up study and there were even attempts to confiscate his Hanford data. Mancuso concluded that the dose required to double a person's risk of cancer *is less than half the internationally accepted limit (33.7 rad against nuclear industry's estimate of 500 rad exposure)*. Unfortunately, all these studies are yet to make an impact on the industrial and military nuclear world.

Reprocessing: In reprocessing, spent fuel rods are broken open and outer cladding is dissolved in nitric acid to separate plutonium and unspent uranium. The plutonium is separated out for use in nuclear weapons or for fuel in a breeder reactor. The process is extremely hazardous and apart from the release of highly radioactive gaseous and liquid effluents, releases routinely nitrous oxide to the air causing acid rain. There is severe occupational threat to health in reprocessing facilities and also serious environmental threat due to production of highly toxic radioactive waste.

Reprocessing has more or less been abandoned in US. Commercial reprocessing plants there have been shut down for years due to faulty technique and excessive contamination. The large reprocessing plants in operation in UK (Windscale) and France are no exception regarding radiation contamination and risk to the workers despite claims by the authorities of safe running. Besides, the Irish Sea and the surrounding environment have been heavily contaminated because of routine dumping of waste produced at these plants. The actual situation at the reprocessing plant at Tarapur is not known; it is said that the planf is inoperative due to contamination.

Waste: As we have seen, nuclear fuel cycle generates vast quantities of radioactive waste at all stages. They have been divided into three categories—high, intermediate and low level, by the concerned international and national authorities. Low level wastes are considered as a low hazard potential. Referring to earlier discussion, it appears that a 50 per cent increase in genetic disorder and diseases are considered by

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Don't Just Reduce Risk—Transform It!

dave rosenfeld

In order to ensure a specially high degree of safety, the job was so highly compartmentalised that those in different departments often could not or were not allowed to communicate with each other.

—Robert Jungk, on the Cap de la Hague reprocessing plant, in The Nuclear State

It would be possible to write a history of the inventions made since 1830 for the sole purpose of supplying capital with the weapons against the revolt of the working class.
— Karl Marx, Capital, *Vol 1.*

THE arguments for nuclear safety have become familiar: 'The risk from a radiation does of 1 rem is the same as the risk of being obliged to smoke 1/20th of a cigarette every Sunday', claims Walter Marshall, chief of the Central Electricity Generating Board (*Atom* October 1982). Independent studies conclude that nuclear electricity in the whole fuel cycle gives fewer deaths per unit of electricity than does coal (see Table in Appendix). The argument appears absurdly simple, yet anti-nuclear objectors get locked into a debate on the exact level of risk from reactors, reprocessing plant, transport bottles, dumped nuclear cargoes and nuclear disposal sites. Hiring experts to challenge the well-funded orthodoxy is expensive. Counter-experts are marginalised from the 'scientific community' and are denied even minor funding. Some, like Professor Sternglass, have been crudely attacked as 'fearmongers'. Some scientists find themselves moderating the objectors' 'overreaction' as they see the risk as numerically low, even if it is really at double or treble the industry's risk figures. For the anti-nuclear side the debate is demoralising and endless.

But there is more at stake than simply challenging the true numbers of deaths due to each technology. The very idea of quantitative 'risk' contains hidden assumptions that influence not only the style and outcome of the debate, but also the detailed choice of technology by industry's managers. This article will draw out some hidden assumptions and challenge them. I end by showing that this is not merely word-play, as the analysis gives useful perspectives for a number of radical science issues, not least nuclear safety.

What is This 'Risk'?

Risk determination is used by the nuclear industry in all its safety cases to marshall safety information, from a number of disciplines, into figures of expected deaths, accidents or disease per reactor, per disposal site, per unit of electricity, etc. For the initial breakdown of equipment, elaborate engineering models ('fault trees' and 'event trees') are used in what's called 'probabilistic risk analysis'. For the spread of contamination, environmental modelling is used. For the effects of radiation on the exposed workers and residents, toxicological models (of 'dose-response') are used. It is not claimed that the models yield causal predictions. Rather they give a figure of risk that is said to give the chance of harm from nuclear power, or from coal when applied to coal. The calculation of risk figures use disciplined methods and are arguably worked through with a degree of scientific rigor often lacking in safety analyses. Yet the actual notion of risk, defined as 'probability of harm', has so far gone unchallenged. And it is precisely this notion, when it is analysed, that turns out to be the vehicle of prevailing prejudices about technology.

Hidden meanings can be seen once we ask why 'risks'—seen from presentations of tables of deaths, in say coal, nuclear or other industries—always seem so fixed. These figures, we are told, represent the risk of an industry, or rather, it is implied—and this is the crucial unspoken step—the hazards *due to the technology* alone. Thus the 'risk' of nuclear power is 1 death in a million people per year. When risk analysts look at average accident rates over decade periods and claim that, on current improvements since 1940 in the coal industry, mining deaths will be down to 0.3 per 10,000 per year by 2000, it reinforces the inevitability and asocial character of risk. It is simply the 'risk of a technology'. We can only wait for the technology to become safer.

This kind of fatalism is reinforced by a risk analysis that excludes the social relations of hazards and so makes risk into a thing, as an inherent, technical property of a particular technology. This definition of the problem serves to relegate 'decision-making' to elites acting on behalf of potential victims. In particular it uses 'risk reduction' to justify supplanting older skilled technologies with supposedly 'safer' ones (coal vs nuclear), or adding on extra 'safety devices to dubious designs for nuclear technologies (British-style PWR for Sizewell).

The prevalence of risk analysis (or 'risk determination' as they call it these days) in the Great Nuclear Debate raises some important issues for the politics of science. Its use is based on the idea that risk is due to a technology and measurable as probable deaths per year. This idea rests on several definite assumptions, rarely spelled out: 'risks' are *in* technology, asocial, randomly striking and quantifiable. Once having analysed these assumptions we will see the dangers of being led to tilt at technology, and of acutally inviting greater managerial control of work via the choice of the 'least risky' technology.

The assumptions that lie behind risk as the 'probability of harm' are as follows:

(1) *The calculated risk is due to the technology alone* (in the sense of 'hardware'). Thus the risk figure is applicable with the same technology to Britain and Brazil, to 1983 and 2003, to managers and workers.

(2) *We are 'exposed" to risks that strike from within the technology; the probability of harm is the probability of being hit.*

(3) *The risk is randomly striking.* For the use of probability:

a) The specific hazardous encounter with technology is identical every time.

b) The risk *exists* in every encounter, but it only *strikes* with harm as the 'outcome' in a few cases, entirely at random.

c) This randomness gives rise to the fluctuations around an average number of people struck per year, as a hand might draw differing numbers of peas from a black bag, but always approximately a handful. It is the average number of deaths that is measured by probability.

(4) *The quantifying of risks makes all activities comparable.* The essential part of this 'risk' is its numerical level. Once that is known, the essence of the risk is grasped. Otherwise incomparable activities can then be compared by ranking them on a scale.

The current use of risk analysis, then, leads us to a particular view of the structure of hazards—risks are asocial, they are external, they strike randomly. If the construct of the risk analysts is to be believed then we are surrounded by randomly-hitting techno death-threats. Is it some kind of macabre prediction when we are given the retort, 'Well, *everything* has a risk?, Is it a wonder that analysts speak of people as being risk-averse?

Safety Science Is Dangerous

How valid is this description of hazards given by risk-analysis? We shall look at its assumption. Some are easily debunked, while others are more subtle.

(1) *Is risk due to technology alone?* For workers from a workforce to die year in, year out, in similar numbers, they must be born, fed, clothed, transported to work, trained, ordered, paid, put in hazardous situations, kept healthy or replaced. In short such statistics require that the whole system that gives rise to the hazard is reproduced. Mortality and morbidity figures for industries, then, do not simply measure some 'technological risk'. Rather, they measure the overall *social reproduction of industrial harm*. That is, they measure social and economic forces that bring people into contact with hazards as much as they indicate any intrinsic hazard of working with the hardware. Accepting the false assumption leads to a false strategy. Attacking technology as the cause of the intolerable hazard will only solve half the problem—you must attack the forces bringing the technology into being, or else a substitute for the same purpose will be found.

(2) *Is risk a thing that 'exposes' and strikes us from within technology? Do risks always strike at random?* These questions are linked by the idea of an alien threat hitting in an unknowable way from outside our experience. Are hazards in essence randomly striking alienated threats? The answer is not straightforward: yes or no. At one level, some hazards do strike randomly. For example pipe breaks in complex plants carrying toxic materials are due to metal fatigue or mechanical failure that is basically a random process. Likewise the effects of exposure to agents like radiation, viruses, invisible asbestos fibres occur in individuals in a way which is governed by random biophysical events.

However, the assumption is false at another level—that is, at the level of individual or collective control over a hazard. Take the case of detailed control by operators over a task. To speak of the 'exposure' to the risk of cutting your own finger with a chisel (assuming the blade is perfect) would sound odd to the skilled craft worker. The ordinary risk of a cut finger is not random to the woodworker since it arises at well-defined times when care can be taken to avoid it. It is the term 'skilled' that we associate with remedial actions being on a human scale, where the 'exposed/at risk' categories would misrepresent that control.

In the case of collective control, information on workplace organisation can transform the nature of risk. For example, ask a worker at the Windscale nuclear fuel reprocessing plant to repair pipework in a high-radiation area unfamiliar to him. Even if there are only a couple of lethal 'hotspots' where doses are high, the whole area appears hazardous. To him (women are not employed in high-radiation zones) a walk in a straight line is like crossing the road blindfold. As the management gives him a chart of hotspots and a pocket alarm meter, he feels sure to avoid deadly spots, confidently and consistently—as long as experience tells him that the management or union safety committe have assured the chart meter are reliable.

In this example, if two areas had the same death rate, it would be preferable to work in an area A (most of which had lethal hotspots but where you're given accurate, trusted information) than in an area B (with very few lethal areas but no clue where they are). If some workers have died in areas A from carelessness, it seems less of a problem to negotiate than if the same number died in area B from a withering beam by bad luck. *The randomness of the risk depends on workplace relations.* So at one level there are indeed randomly striking hazards e g, cancer risks from radiation, viruses, chemicals. At another level hazards are subject to detailed control, so that harm is due to bad design, bad procedures, poor training, poor information or carelessness, e g, woodcrafting and work in 'hot' radiation areas.

(4) Quantification adds no further assumption that is not already made in the earlier points. However, the acceptance of such numbers as inherently comparable serves to hide the assumptions that we've identified.

By assuming that all hazards are randomly probabilistic, risk analysis treats people as passive objects of technological hazards: individual and collective consciousness are ignored. The immediate consequence is that, in general, *strategies to reduce 'risk' evade the issue of control over safety instead encouraging a 'lower risk' technology that is alienated from worker and community control.* The problem is not too little management attention to safety analysis, but too much. The quantitative comparison of different risks encourages deference to the intrinsic 'risk of a technology' and thus to management control over safety.

Historical Origins of 'Acceptable Risks'

How does 'safety' get reduced to a technical choice among different technologies or different devices within a technology? This is done so compellingly by risk analysis by quantifying risk as the probability of harm, yet while hiding the assumptions involved. The 'nuclear is safer than coal' argument, then, involves more problems that the simple, hopeful predictions about nuclear accidents and health damage from radioactivity. More insidious than that, the whole framework treats the harm from each industry as

technical, fixed, while at the same time pretending not to make value-judgements. Ironically, this type of risk-analysis arose from an historic admission of 'no safe level'. Let us see how.

1966 was a turning point for risk analysis. The International Commission on Radiological Protection (a self-appointing, non-governmental body) accepted that radiation may have no safe level of exposure for cancers and genetic defects. Secondly, in that same year a fast-breeder reactor near Detroit burst a fuel pin and partially melted down, thereby exceeding its official 'Maximum Credible Accident'. The safety engineers quickly realised that automatic safety devices can and do fail, so that there is no accident that could be made strictly impossible by engineering safety features. So by 1967, both in toxicology and in engineering, it could no longer be assumed that risks had a 'safe level' that could be found scientifically.

Since the acknowledgement that some hazards have no safety level, new theories of how to predict risks from drugs, rays, bugs, chemicals machines and industries have arisen together with social theories of how to resolve conflicts over safety. One model, popularised by W W Lowrence in 1976, particularly captured the minds of researchers. It appeals to the administrator role of professionals in the scientific/industrial/managerial world. In this view:

i) Everything has a risk—most agents, technologies, occupations, leisure. The magnitude of this is a technical judgement for scientists.

ii) Scientists should rightly avoid statements that something is 'acceptably safe', which amounts to a political judgement.

The view is articulated as follows. No longer can scientists simply show that risks are non-existent and then reassure the union, the patient, the plaintiff or the tenants association. As risks always exist on a numerical scale, a safety standard represents some level of hazard. So someone (society, not the scientist) must either ban the technology or set an acceptable level of hazard, given the benefits of the technology. In effect scientists purport to present simply the facts and then allow others to set 'acceptable risks' within that rigged framework.

Faced with a new technology, or a newly contested one, scientists must now find the objective level of risk from a whole range of exposures. A new science, *risk analysis*, was painstakingly developed, supposedly to give a predicted sliding scale of risks from different levels of technology. This scale was to be input to *decision-making*, where conflicts are resolved by choosing to expose people to a level of risk which is outweighed by the benefits from the risky technology. The decision-making could operate 'rationally'—that is, by using economic arithmetic to spend the limited safety and health resources in proportion to the level of risk.

However, decision-making will be bedevilled by the need to make expedient decisions because, so the model goes, the level of risk people tolerate and the vigor of opponents to risky projects is not in proportion the 'objective risk', as ascertained by risk analysis. People (not the numbers) must be wrong, ignorant, vindictive or irrational. Decision-makers therefore need a second input, apart from risk analysis, namely a socio-psychological study of why people's reactions do not correspond to the objective level of risk.

This whole view, originating in the nuclear and aerospace industries, was seen as the proper way for scientists to set about denying adjudicating on 'acceptable risk'. And, so it appears, scientists could voluntarily abdicate the politically-laden role of reassuring on safety (if only they would!) and could instead retire to the rigorous and objective world of toxicology and safety engineering methods in the new science of risk-analysis. Appealing though this scheme is, however, it has been openly admitted that risk analysis is not entirely objective. And this admission has jeopardised the credibility of 'rational' decision-making and socio-psychological studies of people's irrationality toward risk.

For example, in developing measures of the risk of an industry, risk analysis has used various ways of combining the incidence of different accidents and diseases into an index that would measure the total amount of harm. However the conclusion became inescapable that, where these grand indices were used, risk analysis was making moral judgements. For example, if we simply add days of work lost from different diseases per year, we make judgement about the relative amount of harm from physical versus mental suffering, suffering long versus dying early, frequent isolated deaths versus infrequent mass-killings.

To avoid making such obviously moral judgements, practitioners decided not to aggregate diferent forms of harm. The disciplines of safety engineering and toxicology can systematically analyse failure rates of machines and arrive at does-response curves for toxins. Mathematical formulae then come out with probability of harm per year for *each type* of injury or disease separately. It is these well-defined methods, usable by anyone, together with the experimental data and industrial accident data, that supposedly make risk analysis figures objective. It is only by a detailed look at the definitions of risk (as in the previous section) that we were able to get to grips with this last formulation and understand precisely how risk analysis is value-laden.

Practical Consequences

Risk analysis lies at the heart of the prevailing idea of acceptably risky technologies. Debunking it (i) is useful in general radical science perspectives, (ii) informs some perplexing questions for anti-nuclear campaigns, (iii) opens up an approach for opposing safety analyses that use probability and (iv) facilitates intervention in the 'risk debate'.

Firstly, we have worked through an example of how science clearly acts as ideology. The scientific content—here the very definition of 'risk'—is the vehicle of the manager's right to dominate workers' activities. New questions arise: Should socialists abandon entirely the elaborate and rigorous methods of engineering risk analysis? Is there a socialist science of risk? Will the simple expedient of stating the social relations of (quantified) risk overcome the objection?

Secondly, we can see how the dominant managerial definition of nuclear safety fits well into the wider nuclear project. Although nuclear energy will not deliver any net *energy* until after the turn of the century—due to a net consumption during the construction part of the programme—it could

generate 30% of *electricity* by 2000. That is much more than nothing at times when transport workers or miners block the remainder.

> ...a nuclear programme would have the advantage of removing a substantial proportion of electricity production from the dangers of disruption by industrial action by coal miners or transport workers. —leaked minutes of Thatcher's Cabinet Sub-Committee on Economic Strategy, October 23, 1979 (originally published in *Time Out*)

Nuclear safety systems

—require often intense workplace discipline, e g, the restrictions on internal communication at Cap de la Hague;

—require no-strike agreements to achieve their assumed performance; and

—rely on highly qualified scientists whose work and attitudes are highly integrated into management perspectives.

Risk analysis, portraying risk as a neutral quantitative matter, paves the way for work organised under nuclear managers' discipline, even blackmail, all in the name of *more* safety. Is it not preferable to back coal, where a knowledge and control of the system by workers give higher chances of winning a better safety deal than with the polutonium state? What guarantee is there that current nuclear safety standards will not be eroded when the Tory government has further cowed workers and other opponents with nukes? Already Reagan has been declaring the nuclear industry to be 'over-regulated', and promising side-steps to licencing hearings.

As scientists are involved in designing and assessing technologies, they should be aware that their work influences the relations of control. When people reject 'dread hazards', this is not simply a matter of their ignorance of 'the true risks', but a sign also that no trust has been built between people facing hazards and those in control. Sometimes distrust comes from consistently negative experiences, as many shop stewards in industry will testify. But in other cases it is a sign that there is no consistent experience that people can rely on. In short, there is a gulf between people's experience of technological change and scientists mostly aligned to managerial priorities, as defined especially by risk analysis. It is this class nature of scientists role, and not some fundamental irrationality of people, that generates hostility to new hazards.

Thirdly, is it possible to challenge nuclear science as science? The technical literature clearly paints the picture of a systematic safety programme that's the envy of chemical safety campaigns. Time and again the literature asks whether this effort is 'enough'. It seems a logical definition of the problem. Yet once we are in the thick of the numbers game, it is hard to challenge the expensive and extensive studies that show nuclear power as 'relatively safe' or 'about as safe as coal'. Most critics stick to the general issues of the politics of plutonium, rather than wade through the swamp of reactor science, radioecology and radiotoxicology. There has been no analysis that criticises nuclear science as a starting point for identifying the problem. Our analysis removes this quandary. By analysing the precise use of probabilistic risk, we can argue specifically on the science of safety and win! That is, we can expose the class base of the technology by dissecting a key scientific concept, quantitative 'risk'.

Lastly, radical research on safety is given a new focus by this analysis. We've discovered that the key debate is not

Low-Level Radiation – Out of Control

Workers at Windscale experience, by and large, a comprehensive programme for avoiding the 'hot-spots'. This programme has engendered a basic confidence that risks are under control. At the plant, workers are understandably quite defensive when 'outsiders' allege that their work is dangerous, as they find themselves identifying with management on the safety issue.

This attitude affects relations over the low-level exposures. With low-level radiation, in contrast to the high-level situation, there is no alternative to an intrinsically random. untouchable, unknowable hazard. You do not even know whether you have been affected until twenty or so years after the event. Routine, random low-level exposure is tolerated in the knowledge that the chance of harm per person is very remote.

But this 'knowledge' is chimerical and entirely different from daily witnessing a competent hot-spot management operation. For low-level work, badges are issued and exposures tallied, but the knowledge of the hazard is available only from scientific studies. BNFL's interpretation of the studies is accepted. This acceptance might be seen as a spin-off from the confidence won from their track record in hot areas, their vindication by 'independent' Government bodies and their success in dealing with scientific challenges in the press and at inquiries. As BNFL win this confidence game, the scale of low-level radiation risk remains uncontested as a workplace issue. (What has been contentious is the administrative practice of 'burning out', or exposing unruly workers to the yearly maximum allowed radiation, thus disqualifying them from further work in the year—but this is not directly linked to the 'randomness' issue.)

This historical aquiescence by most workers, on the lower-level exposures, should not distract from the very different relations of control. With high-level exposures, concern is highlighted when for example a direct injury occurs, with visible effects within hours or days. The response is obvious: press for effective measures to prevnt any repetition, with whatever muscle you have. With low-level exposures, your concern over getting a cancer or deformed kids is heightened only by claims that the old risk-estimates are wrong, that it's more dangerous now. Workers don't control science; the pronouncement could appear to come out of the blue unless you have reliable information from scientific allies. And you have already been exposed; you cannot change that fact. Without those scientific allies with a proven track record, the choice is between management's reassurance and abject worry. Thus the class role of scientists is crucial.

about the level of risk from Sizewell B's proposed PWR. The numbers used in risk analysis talk only about the hardware failing. When operators are mentioned, the chance of 'operator error' is used entirely as if operators were hardware, albeit defective. At nuclear plants we must expect that the real failure rates will be dependent on the social system that organises it:

Real responses of thinking, waged operators
—Workers may be on strike in a minor accident sequence.
—Management commitment to a training programme may lapse.
—Complex but infrequent modes of failure may happen in too short a time for anyone to cope.
Smoothly running quality assurance programme
—Subcontractors may falsify quality inspections (and have done so).
Smoothly running maintenance programmes
—Non-unionised temporary maintenance workers may rebel against 'burning out' practices.
Effective inspection programmes
—Inspectors close to the industry may be lax, believing risks low. (Hendrie, chief US regulator, was sacked after Harrisburg.)
'The techbology'
—Like each car, each reactor has its own unique history of construction and maintenance.
—When politicians like Reagan (or an 'over-regulated' industry) change standards, the PWRs built and maintained may be different.

In non-nuclear safety there is an increasing tendency to follow the assessment methods developed in the nuclear energy debate. In fire safety, asbestos control and chemical plant safety we see use of 'cost benefit analysis', 'reasonably practicable reductions', 'engineering risk assessments'. These all rest on the idea of balancing costs of reducing 'the risk' against supposed benefit of using the technology.

There are many obvious questions to raise about these schemes: Who benefits from the product? How do you measure the cost of life? Our approach goes further by challenging the scientific definition of 'the risks' that were measured in the first place and that were assumed to exist in the technology as a thing, not as an organising system. Through our approach, the question of control over the risk can be made central to the debate even before monetary costs are raised. Indeed, the particular social construction of nuclear risks turns out to be less a cost than itself a benefit to nuclear management.

The numbers game has often led environmentalists and hazards campaigners into a blind alley of demanding 'zero risk'—an idealistic and unrealistic focus. This quandary points to the real difficulties with either rejecting or accepting a (supposedly apolitical) 'balance' between health 'costs' versus industrial 'benefits'. That kind of choice usually confronts us as utterly compelling, universal rational. For example, could socialist societies delay reconstruction programmes until all industry is conclusively proven 'safe'? Our approach offers a way out of the quandary: while defending the primacy of health, we can assert the issue of control as central to any 'acceptability' of hazards in the name of wider benefits.

In conclusion: Beware the 'low-risk' technology of safety science, which serves to usurp control over hazards and thus guarantee management's safety from workers. The important safety question facing workers and communities is not some precise, numerical level of safety. Rather it is how we can gain detailed control over deciding which risks we take, so that we are confident, at all times, they're worth the benefit. How do we transform alien hazards?

[Reprinted from Science Radical Journal 1989.]

(Continued from p 118)

the international atomic energy authorities as a small hazard.

Safe management of radioactive waste is an unanswerable problem of the age because toxic products are not only highly lethal but remain radioactive for several million years. The more we go nuclear, the more we are adding to the problem of survival of our future generations.

There have been some romantic suggestions disposing of toxic waste from the earth by rocket into space or deep burial under the Antaractic ice but no adequate solution has yet been devised. Uptil now only high level radioactive wastes are stored in carbon or steel-concrete tanks which last 30-50 years; and low and intermediate level wastes are either dumped into the sea or buried underground in concrete silos. Proposals bave been made to solidify the highly toxic waste in glass blocks to be stored in shafts drilled in the seabed or under hard rock.

All the attempts and plans are far from reaching any real solution. There have been leaks from the storage sites contaminating the surface and ground water and the atmosphere and causing serious health hazards. We know very little about India's waste management programme.

The operation of a nuclear reactor generates astronomical quantities of radioactive waste of different types and of varying half-lifes ranging from a few seconds to a few thousand years. The amount of radioactivity produced from these elements is in direct proportion to the operation of the reactors. Even after Chernobyl which has put a big question mark on the future of nuclear power, India's nuclear policy is unchanged. We have an optimistic plan of 10,000 MW electricity from nuclear plants by 2000 AD! It is estimated that one year's operation of a 1000 MW nuclear plant generates fission products equal to that of a 23 megaton fission bomb; that is more than 1,000 bombs of the Hiroshima size.

Safe, permanent and absolute isolation of these radioactive poisons from the environment is the only condition for nuclear power to be acceptable. And this is simply not realistic. There is no disagreement today about how much radioactive poison is produced by the nuclear power plants. There is little or no disagreement about how lethal these poisons are. The disagreement lies in the quality and quantity of routine release of radioactive elements during all steps of the nuclear fuel cycle. Will the nuclear advocates give a satisfactory answer to this? No, they cannot and will not. The only answer is:

STOP NUCLEAR POWER

The Numbers Game

Occupational Health Hazards at Indian Rare Earths Plant

v t padmanabhan

The Department of Atomic Energy is currently pushing forward its ambitious plan involving a ten-fold expansion of nuclear power generation by the year 2000. This would involve the setting up of a number of nuclear establishments and would expose a number of people, workers and neighbouring communities to varying degrees of excess radiation. The Indian Rare Earths is the only DAE venture which has completed 30 years of operation, which incidentally is the average latency for cancer which is just one of the health hazards of exposure to radiation.

This paper (condensed from the Economic and Political Weekly, *March 8-15, 1986) reports a retrospective epidemiological study of workers at the Rare Earths Division of the Indian Rare Earths Limited, Alwaye in Kerala. The study examines the mortality profiles of workers for the last 15 years. Workers at the nearby Travancore Cochin Chemicals and those insured with the Employees State Insurance Corporation are taken as the control populations. The study demonstrates a significant difference in the incidence of cancer and mortality due to heart diseases and all causes between the IRE workers and the control populations. The incidence of sterility among the IRE workers and genetic disorders among their children also appear to be high. However, a study of this sort can only formulate a clinical hypothesis. There is an urgent need to institute a comprehensive, inter-disciplinary study of the plant and the workers. Such a study cannot unfortunately be conducted by independent workers or research centres because the Atomic Energy Act of 1962 prohibits any such inquiry into the affairs, including health and safety issues, of the DAE.*

AN Occupational Health (OH) study involves the use of multidisciplinary techniques of medicine, environmental science, social science and law. To be complete, the study should focus on the health status of workers, quantify the pollution load in the work environment and study the health and safety apparatus available including the internal safety organisation and compensation structure, etc.

In this paper, an attempt is made to study the health status of workers of Rare Earths (RE) Division of the Indian Rare Earths Limited (IRE) Udyogamandal, Ernakulam, Kerala. IRE, an undertaking of the Department of Atomic Energy (DAE), is engaged in the processing of monazite sand found in abundance in Kerala and Tamil Nadu coasts. The plant under study has a processing capacity of 4,000 tons of monazite a year. The main products of IRE are thorium, rare earths (RE) chloride and zirconium. Thorium is at present used in the production of gas mantles. The metal, which derives its name from Thor—the Scandinavian war god—would be used as fuel in breeder reactor which is still in research stage. Zirconium is used for cladding of uranium fuel pellets for atomic reactors. The other important product—RE chloride—is used in the chinaware industry. India commands a share of one third of the world market for this product.

The Health and Safety Division (HPD) of the Bhabha Atomic Research Centre (BARC) under DAE is entrusted with the sole responsibility of health and safety of workers in units under DAE. The Atomic Energy (AE) Act, 1962 prohibits an independent scholar or a research centre from making any inquiry into the affairs of the DAE, including the health status of its workers.[1] Even though the DAE units employ more than 20,000 people, no data regarding workers' health status is available, except, of course, occasional briefings to the press made by the official spokespersons.[2]

In this section, the production process at the plant under study is described briefly and an attempt is made to identify some of the more hazardous locations found on visits to the plant.

The main raw material used is monazite which is an orthosphate of 15 rare earth elements and thorium. The sand is ground in the ball mill to 400 mesh size after which a suction pump pulls out fine dust through a filter and deposits it in a bin. Dust is then mixed with dilute caustic soda (lye). The solution is then pumped into the attack tank where caustic soda (flakes) is added. The solution is then moved to arelay tank and leached with water. The first product of the process—Trisodium Phosphate (TSP)—a general purpose detergent—is decanted here.

The remaining slurry containng hydroxides of rare earths, thorium, uranium, mesothorium and lead is pumped into a set of 'More Filters' where it undergoes filtration and washing. Traces of phosphate are removed and slurry is pumped into four extraction tanks where concentrated hydrochloric acid is added. At this stage, the RE fraction of the compound becomes RE chloride which is drained out and pumped into a deactivation tank in which barium chloride and sodium sulphate are added. Deactivation involves separation of radioactive elements like uranium, thorium and their 'daughters'. These as well as lead are then allowed to precipitate in the tank. The precipitate is mechanically separated through press filters. The clear solution which is pure RE chloride, is decanted and the precipitate is scrapped off the press filters manually. Thorium hydroxide is also sent to another set of press filters to remove traces of RE chloride. Thorium hydroxide is scraped manually and pumped into a silo.

While no spot in the IRE compound seems to be free of radioactivity, there are a few processes which involves considerable threats to the workers. Let us consider a few examples:

(a) *Ball Mill*: The mill where monazite is ground is not air tight. There are numerous holes through which dust can escape. Moreover, mill vents have to be opened frequently for sample collection. This is done manually by the operator/helper. Though respirators are given, the workers do not wear them because: (i) it is uncomfortable; (ii) since a worker has to attend three spots, it is inconvenient; and (iii) since the volume of air breathed is reduced considerably, the worker is not able to cope with the work-load.

(b) *Filter Press ('Cancer Ward')*: At filters where thorium and

mesothorium are pressed into cakes, materials handled are richest in radioactivity. Here work is done in pairs, each worker standing on either side of a 10′×2′ rectangular press, with a series of wooden frames. The top of the press is at chest level. The sticky concentrate has to be scraped from the frames using a metal sheet as big as a kitchen knife.

Workers on this job are given gum boots and rubber gloves. On the day of our visit, one of the two workers was not wearing gloves. He said that with gloves, the speed of work is reduced considerably. The plant superintendent who accompanied us did not ask him to use the 'protection gear' either. Mesothorium has gamma activity. Rubber, in any case is not a shield against this.

(c) *Lead sulphide disposal*: Lead sulphide (which contains lead, mesothorium, etc,) collected in the RCC barrels remains unsealed for a week. The barrel is located by the side of a road leading to the canteen/dispensary. They are sealed once in a week. After a year or so the barrels are buried in the factory compound itself by a disposal team consisting of a crane operator from the Fertilisers and Chemicals Travancore Ltd (FACT) and contract workers. The latter have to remain close to the barrel for securing its hooks.

According to the International Labour Organisation (ILO) guidelines, this class of radioactie waste can only be handled in "sealed-in operations, with people working in plastic suit with controlled ventilation".[3] In IRE, workers wear only cotton khakhi uniforms.

(d) *Thorium Silo*: Wet thorium hydroxide, kept in silos is removed occasionally for transportation to the Trombay facility. (This is a Government of India-owned company which is under the management of the IRE. Here, thorium hydroxide is converted into thorium nitrate for gas mantles and thorium oxide for research purposes.) Since silos contain many hundred tons of thorium stored for over three decades, there is the possibility of a high concentration of thoron, a thorium 'daughter' in gaseous form. According to ILO, air in the silo has to be evacuated once in every 17 minutes.[4] There is no facility for this in IRE. With radionuclides and thoron gas, work in the silo can be equated to both a radiation bath as well as a radiation dust bath.

(e) *Open Vessels*: Almost all chemical treatment is carried out in open vessels. Spillover of considerable vintage has accumulated all over the vessels. Because of the openness, radionuclides and thoron gas float freely in the workplace. In almost all processes, the external skin contamination is totally unavoidable because of the bad housekeeping. According to the plant superintendent the vessels as well as the floor, which appeared no different from a paddy field during transplantation had not been cleaned for over a decade. While the above hazards are of a day-to-day nature, there are riskier operations which have to be performed periodically. Some examples are given below:

(a) *Digging the Pond*: After extraction of TSP, the remaining slurry is washed in three tanks. The slurry is moved from tank to tank with an electrically-operated crane with a maximum capacity of five tons. At times, when the slurry is beyond the carrying capacity of the crane, or due to some other faults, it has to be removed manually. Workers, usually new recruits, enter the tank with a shovel. They can wear their gum boots and rubber gloves, if they wish to. The slurry is removed with the shovel and this job is known as 'kulam vettal" which, in Malayalam, means digging the pond. The approximate frequency of this event is one a month. The tank contains hydroxides of rare earths, thorium, mesothorium and uranium which have alpha, beta and gamma activity.

(b) *Digging the Grave*: Lead sulphide, the main solid waste, which contains mesothorium and other radioactive materials, is stored inside an RCC barrel which can accommodate 200 kg, the approximate output is more than normal, excess quantity bulges out of the polythene bag kept inside the barrel and is removed manually with a shovel. This has to be done approximately once every month. The materials have beta and gamma activity.

(c) *Occasional Activities*: Apart from these, occasional activities like shifting of godowns are done by contract workers. During 1983, dock workers of Cochin were employed to remove thorium concentrate stored in IRE godown near the port. According to an eyewitness, many of the MS drums in which the concentrate was stored were corroded and broken. During January/February 1985, casual workers were employed to shift thorium produced during he early fifties to the present silo. No protection was given in the above cases.

Among the permanent employees, the exposure rate is not uniform for all categories of workers. While helpers remain in close proximity of the production process, operators and supervisors who do not have to do much of a manual handling, remain a little away from it. However, the management has made it a point to evenly distribute hazards among all the workers. This has been achieved in two ways: (i) In IRE, there is only one entry point for workers, they are recruited as helpers. The posts of operators and supervisors are time-scale-promotion based; (ii) After a complete monitoring of the plant by HPD in 1966, permanent posting of workers to separate sections within the production line was discontinued. A rotation system was introduced under which every worker moves out of one section after a fixed interval.

The production technology was imported from France where it was developed in the forties and is outdated by nearly half a century. During those days, the awareness of radiation hazards was at a very low ebb, restricted as it was to a few radiologists. Between then and now, developments of a far-reaching nature have taken place. In IRE, however, the increased awareness of radiation hazards has not lead to any innovation to prevent it at source. Instead, cheap and totally inefficient measures like gloves and gum boots have been resorted to.

The Numbers Game

In a latter addressed to the Prime Minister April 15, 1985 Professor K V Thomas, member of the Lok Sabha from Ernakulam, alleged that 14 workers of IRE died of cancer between 1970 and 1984. The prime minister in his reply (April 23, 1985) promised that he would have the issue examined. Earlier, in a memorandum addressed to prime minister, all the recognised trade unions of IRE had pointed out that the high incidence of cancer among workers can be attributed to radioactivity.

In our review of literature, we saw that the cause-effect relationship between radiation and diseases like cancer, genetic disorders, etc, has been well established. However, these diseases can also be caused by agents other than radiation. There is no

way to ascertain the initiating factor in carcinogenesis at present.

Since occupational diseases do not carry a label indicating their origin, indirect methods have to be resorted to understand their aetology. Causative relationship between an agent and a disease is established through epidemiological studies, in which the incidence of disease in the exposed population is compared with that of a non-exposed population. An epidemiological study can be either retrospective or prospective. In the former, disease/deaths which have already occurred in the past are studied. In contrast, a prospective study is futuristic, the student waits for the event to occur. If a clearly identifiable trend is discernible, it is ethically sound to study the past, so that speedy remedial action can be initiated.

In this section, the incidence of cancer and mortality due to heart disease and all causes during 1970-1984 among IRE workers is examined. In an epidemiological study, the two population compared (the exposed and the control groups) should belong to similar socio-economic, age-sex groups.

Given the weakness of available estimates/data, use of a sample of industrial workers sharing a common socio-economic background would yield mroe reliable results. Adjacent to IRE, there are three more industries which form a cluster. There are the Hindustan Insecticides Limited (HIL), producing organochlorine pesticides like DDT and BHC, the Fertilisers and Chemicals Travancore Limited (FACT), manufacturing nitrogenous and phosphatic fertilisers and the Travancore Cochin Chemicals Limited (TCC) producing caustic soda, chlorine, etc. HIL and FACT have carcinogens in the work-places, like BHC and DDT in the former and rock phosphate which contains uranium in the latter.[5] None of the chemicals handled in TCC is known to be cancer causing. Moreover, since both IRE and TCC went on stream during the same year, the age composition of workers is more or less similar.

In TCC, caustic soda is produced by electrolysing sodium chloride (common slat) using mercury as cathode. Mercury is highly toxic; chronic exposure can cause neurological and skeletal disorders. Workers are also exposed to heavy concentration of chlorine which is a by-product. Over and above the pollutants released by their respective industries, the workers of both IRE and TCC have to live with invading pollutants from neighbouring factories—sulphur dioxide, ammonia and fertiliser dust from FACT and DDT from HIL.

In terms of wages and perks, both the population groups are on a more or less equal footing—the only difference being a higher rate of bonus and a liberal housing loan in IRE. On the health care front, workers receiving less than Rs 1,000 a month are insured under ESIC. Those earning above Rs 1,000 have a company medical scheme under which expenses incurred on treatment of workers and their families in private hospitals recognised by the management are reimbursed.

TCC has a residential colony in Udyogamandal itself, which is high pollution zone.[6] In contrast, workers of IRE have their residence scattered in the entire district. Hence, the pollution load in the living environment (beyond the factory) of TCC workers is higher than that of IRE.

In this study, we have used the workers of TCC as well as those insured under the ESIC as our control populations.

In the case of cancer, there is a time lag between the crucial exposure to carcinogen and the manifestation of the disease. Known as the latency period, this ranges from six to 30 years. In this study, we are examining cancer cases between 1970 and 1984. While the exact time of the crucial exposure cannot be known, we can be reasonably sure that the first worker diagnosed as a cancer patient in 1970 must have had his exposure at least six years before, i e, in 1964. As such, we would have to consider the worker strength of 1964 as the base line population.

In an industry, exposure to pollutants is not uniform among all categories of workers. An estimated 20 per cent of employees who are on non-production jobs (like clerks, peons) can be classified as the marginally exposed group. The remaining 80 per cent of employees, whom we classify as the seriously exposed group are taken as the base-line exposed population.

These manipulations are not possible in the case of ESIC data because we have no way to ascertain the year of enrolment or the nature of the job of the workers who have been diagnosed as cancer. As such, we would take the entire insured workers of the respective years as the base-line population.

Since ours is a retrospective study, we are examining the mortality profile of the past 15 years. Here, we are confronted with the problem of assessing the exact cause of death. What are the sources of information from which we can obtain reliable data? Firstly, the hospitals. While some hospitals informed us that the old documents are not preserved, two major hospitals refused to co-operate for reasons known only to themselves.[7] Then we looked into the register of births and deaths maintained by the local self-governments. In many cases the cause of death has not been recorded properly. This is an all-India phenomenon. It is only recently that the Indian Council of Medical Research (ICMR) has initiated a programme for maintaining the mortality data in India according to the World Health Organisation (WHO) norms.[8] Another source could be the personal dossiers of workers maintained by the management. Even this source is not free of errors as can be seen in the ensuing discussion.

Insted of depending on a single source, various soruces as given below have been consulted so as to arrive at a near accurate conclusion. Lists of workers who died along with the cause of death were obtained from the trade unions of IRE and TCC. The cause of death was cross-checked from dossiers. Cases in which the union data did not tally with the dossier, detailed interviews of co-workers, trade unions activists, family members and neighbours were conducted.[9]

To enable comparison of the data of all the three population groups (IRE, TCC and ESIC), it has been converted into rate per 10,000. After conversion, the relative risk in IRE was estimated.[10] Statistical test (chi square) was used to see if the difference between the study and control populations is significant.

Cancer

According to the unions, 14 workers of IRE and four workers of TCC died of cancer between 1970 and 1984. As per the IRE dossiers, only eight workers died of cancer.

Out of the six controversial cases, it is impossible to accept the unions' claim of cancer as cause of death in the first three cases. In the case of one, it is difficult to arrive at a definite conclusion. The last two workers, we are reasonably sure, died of stomach cancer. This brings the total number of cancer deaths

in IRE to ten. One worker is now under treatment for lung cancer. In all, there have been 11 cancer cases in IRE since 1970.

Our data have the following serious limitations:

(a) Workers who left service since 1964 have not been followed up. Table 2 provides the service particulars of the existing workforce in IRE. Out of 471 employees, 67 started working before 1960 and another 30 joined between 1961-66. Average annual enrolment during 1961-66 being 5, there were 87 employees on April 20, 1985, who belong to the pre-1964 stock. Thirty-two workers of the pre-1964 stock are now in the managerial cadre, another 22 died while in service during 1970-1984. In other words, out of 328 base-year worker population of IRE, 187 have either resigned or retired. Of these, 140 (80 per cent) belong to the seriously exposed populaton. Since we do not know what happened to them, our result is likely to be a gross underestimation of the exact risk in IRE.

(b) The level of accuracy with which cause of death is recorded in the dossier is questionable. For instance, in one case, of death has been mentioned as "failure of heart" which is a layman's term for cardiac arrest. More revealing is the entry showing costochondritis as cause of death.

In IRE, there were four cases of stomach cancer. The remaining cases are of different sites. While radiation injury can produce malignacy of any organ, there is a strong association between certain types of cancer and occupational exposure, like lung cancer among uranium dial painters. Let us see if we can offer any explanatory hypothesis for the randomness of 'site of cancer' in IRE.

IRE has all kinds of radiation hazards, *viz*, external from beta and gamma rays, internal from ingested nuclides and inhaled radioactive gases like thoron and radon. The most serious threat in IRE seems to be from the internal emitters which are either ingested or inhaled. Now let us see the behaviour of internally deposited radioactive elements:

(a) Thoron is a noble gas (it does not react at all). It has alpha activity and a half life of 54.5 seconds. Polonium, the thoron daughter is a slid with alpha activity and a half life of 0.16 seconds. Next in the series is Thorium B with beta and alpha activities and a half life of 10.6 hours. While thoron does not react, her daughters get attached to the tissues nearby, in this case lungs. And keep on damaging the cells.

(b) We have earlier observed that all heavy metals (including the radioactive ones) follows the course of calcium. In other words, as the ageing process sets in, ingested radioactive metals settle down at soft tissues all over the body.

(c) The ITRC study quoted above reveals that thorium also settles down in testicles. Albert R E reports that workers in plants refining thorium have shown chronic deposition of the metal in lungs, lever, kidneys, spleen and bones."

All this evidence proves tht once thorium enters the body, it behaves very randomly. So does tumour. Clumps of cancerous cells, often break away from the parent tumour, migrates to new organs seed out and start growing as secondary cancers, which are known as metastases (literally, "standing in an abnormal place"). Sometimes, the primary cancers remain undetected. We have therefore taken all types of cancer (including leukemia) into a single group for the purpose of analysis.

Heart Diseases

Let us now examine the incidence of heart diseases in IRE and TCC. The method of data collection for this has been the same as that for cancer.

A word of caution—as mentioned earlier, workers of both the factories are exposed to invading pollutants from neighbouring factories. Among such pollutants, sulphur dioxide released by FACT is of more significance in terms of concentration as well as the associated health hazards. Chronic exposure to this gas leads to thickening of alveoli walls of lungs, causing respiratory diseases like bronchitis, which at a later stage can graduate to heart diseases. This disease cycle is kwnon as Chronic Obstructive Pulmonary Diseases (COPD). The incidence of respiratory and heart diseases is very high in the entire area.

All the cases of heart diseases in IRE therefore cannot be attributed to the pollution caused by the manufacturing process in the plant. Likewise, the frequency observed in TCC may not be the expected frequency in an average factory. Assuming that the pollution load by FACT is equal in both IRE and TCC, the difference in frequency between the two population groups can be attributed to the presence or absence of causative agents in their respective work environments.

The figures for IRE and TCC are fatal heart diseases. The ESIC data, which also is presented below represents the incidence only—not all of them might be fatal.

Mortality Profile

So far, we have examined the frequency of two radiation caused diseases—cancer and heart diseases. There is another group of diseases which is broadly classified as radiation-aided. We saw that radiation can also cause cell death. An absorbed bone marrow dose destroys white blood cells, which are essential for fighting infection. If cell death is massive, the organism would be rendred incapable of fighting even a very common infection.

Cell death can also lead to premature ageing. Measurement of the ageing process involves high technology gadgets which we have not been able to use. However, since the end result of ageining is death, consideration of the total mortality profile might reveal certain basic trends. Let us compare the total mortality (due to all causes other than suicide and accident) in IRE and TCC. (Mortality data pertaining to workers insured under ESIC is not available.)

In order to facilitate comparison between units, data presented earlier has been converted into rates per 10,000. Relative risk between IRE and TCC for cancer and heart diseases is 4.62 and 2.24 respectively. Coming to total mortality, IRE workers had 2.72 times greater risk of dying of all causes. More pronounced is the relative risk between IRE and ESIC which is 6.77 and 2.72 for cancer and heart diseases respectively.

How significant are these differences? In the case of cancer, difference between IRE and TCC/ESIC is statistically significant at 0.01 level. For heart diseases, while the difference between IRE and TCC is significant at 0.2 level, the difference between IRE and ESIC is significant at 0.01 level. Difference in mortlity due to all causes between IRE and TCC is significant at 0.01 level. In short, we can conveniently reject the null hypothesis.

Genetic Disordes and Infertility

During the course of the study, we also stumbled upon a few cases of sterility among workers and genetic disorders among their offsprings. The data is not comprehensive. Major reasons for limitation in data ae as follows:

(a) Most diseases of autosomal dominant variety manifest themselves at a later age. The parents do not perceive such cases as genetic.

(b) A welfare measure in IRE has not made any survey (with limited resources) of families virtually impossible. IRE is one of the few industries in India which has a unique housing scheme. An employee can build a house with a liberal loan from the company at a place of his choice. Since every worker with a minimum of ten years of service can own a house under this scheme, the unions did not press for a housing colony. Some workers in IRE feel that the liberal scheme was introduced for concealing the increased incidence of genetic disorders among the employees' offsprings. Incidentally, the scheme was introduced a couple of years after the health physicists' team took position in IRE.

Among the affected workers, one in three alone presented the children before a medical board, consisting of three doctors of Lissie Hospital, Ernakulam. The board ruled that the cases can be attributed to inbreeding.

There are two types of inheritance of genetic disorders—autosomal dominant and autosomal recessive. In autosomal dominant inheritance, only one of the parents supply a defective gene, while in the recessive inheritance, both the parents supply the defective gene at the same genetic locus. The 'book' has the following to say on the nature of inheritance:

> In as much as recessive diseases require the inheritane of a mutation at the same genetic locus from each parent, when the genes are rare, the likelihood of any two parents being the carriers for the same defect becomes small. However, if the parents have a common ancestor, and if that ancestor was a carrier of the recessive gene, then the likelihood that two of the descendants have inherited the gene becomes relatively great.[12]

A person who has inherited a defective gene which lies dormant would not be affected by the disease. He or she is called a carrier. When two carriers of the defective gene at the same locus mate, the statistical probability of inheritance is:

> twenty-five per cent of the children will be normal, 50 per cent would be heterozygous carriers and 25 per cent would be homozygous and affected with the disease . . . Since with recessive inheritance, only one of the four children in a sibship is expected to be affected, multiple cases in a family might not occur.[13]

In the case another worker, all the four children have been affected. Moreover, according to the worker, he and his wife are sixth in a chain of consanguinity. This introduces an increased possibility of some other relatives also being affected. No one has been, so far. Secondly, as the provisional diagnosis shows, all the children do not share the same symptom complex or clinical history. This suggests the possibility of damages at different genetic loci. Hence, the probability of both the husband and wife carrying several damaged genes seems to be extremely remote.

Infertility

It is not possible to assess at this stage whether all these cases are radiation-related. If they are, then the situation in IRE would have historical significance. IRE, in that case would be the first reported nuclear facility in the world to cause radiation-induced sterility among workers.

Cases of sterility deserve a closer examination. In the survey of literature, we saw that unlike cancer and genetic disorders, sterility is a non-stochastic effect which has a safe threshold. Since there is no history of radiation-induced sterility among males, the exact sterilising dose is not known. Sterilising dose for females is 700 rems, administered during a short span of time. Since overies are more protected than testicles, male sterilising dose should be lesser than that of females. One estimate places the dose at 60 rems. Assuming that the workers became sterile during the first twelve years of their service, the annual average exposure works out to 50 rems, which incidentally is ten times higher than the maximum permissible limit.

Health and Safety Apparatus

HPD of BARC is responsible for monitoring the health of workers in all DAE undertakings. Health physicists were posted in IRE, Alwaye, in 1962, ten years after the factory went into stream. In 1966, the team recommended a few safety steps, like rotating workers from spot to spot after a fixed interval, provision of gumboots and rubber gloves, etc. HPD is supposed to monitor the dose absorbed by workers and take remedial action in critical cases. Monitoring is done by analysing the film badges worn by workers. Film badge analysis alone is not adequate in an industry like IRE where the major hazard comes from radionuclides and radioactive gases like redon and thoron. A near accurate account of the dose absorbed can only be made through analysis of biological samples which is not being done in IRE. Even the results of film badge analysis is not communicated to the workers. Similarly, HPD had conducted a chromosome analysis of Alwaye workers during the late seventies, the result of which has also not been communicated so far.

In the past, three workers were transferred to less hazardous jobs because of adverse medical findings. In these cases, the workers who had got medical advice from private practioners had to fight their way out for transfer. HPD, rather than assisting in such cases, strongly opposed the transfers. Even though all workers suffering from occupational diseses are entitled for compensation under the Workmen's Compensation Act 1923, no one in IRE has got it so far. In short, there is nothing much to comment on the health and safety apparatus in IRE.

Chromosome aberration, chemical change of DNA and cell death are the immediate cellular responses to an absorbed dose of radiation. The end result could be any of the stochastic or non-stochastic diseases mentioned earlier. In this paper, we have been able to demonstrate statistically significant differences in incidence of cancer and mortality due to heart diseases and all causes between IRE workers and control populations. The incidence of sterility among workers and genetic disorders among their off-springs reported above is seemingly higher than their spontaneous occurrence in general population.

A retrospective epidemiological study of this nature, can only formulate clinical hypothesis. At best, one can state that the study population was exposed to the agent under consideration during the reference period—in this case till 1964. Incidentally, two years after this, the so-called control measures were introduced in IRE an HPD. How effective are these measures? To obtain an answer through an epidemiological study, one would have

to wait a few more years. Fortunately, we have a little more concrete evidence. In 1978, BARC conducted a chromosome study of IRE, Alwaye, workers. Though the results of this sutdy are yet to be published, there is a reference to this one of the DAE annual reports:

> In continuationof the efforts to evaluate the biological effects of high background radiation on human population residing in the monazite belt (Chavara, Neendakara in Quilon district, Kerala), chromosome analysis was carried out on 179 samples.
>
> Under our chromosome analysis programme, broad sample in the normal background areas were analysed. Data on newborn and their mothers did not indicate any differences in the chromosome aberration frequency between samples from normal background radiation areas and those from high background radiation areas.
>
> In the samples taken from the IRE workers at Alwaye, a high abberration frequency was indicated than that observed in the high background radiation, Chavara and Manavalankurichi samples.[14]

In short, workers' health was, and still is in jeopardy.

During the course of our study, we also found that there are gross irregularities in the fields of radioactive waste management, as well as storage and transportation of radioactive materials—issues which are beyond the scope of this paper and hence being reported separately.

The situation is alarming. This calls for immediate action. The management of IRE has agreed to palliative measures like scanning of all workers for tumour by the Cancer Detection Centre, Cochin, which is not enough in a hot spot like IRE. The need of the hour is a comprehensive, interdisciplinary study of the plant and the workers. In order to take effective remedial action, there should be a health survey of the workers which should include analysis of urine, blood, chromosome and tissues of critical organs like gonads. The workers who have absorbed dose above the permissible levels should be removed to safety. In the case of work environment, activity status of each spot would have to be measured and engineering measures adopted.

Such a study should have representation from the workers as well as the people because what at stake is not only the health of over 500 employees, but also the national gene pool which the present decision-makers have no right to tamper with. We do not own the gene pool.

A clear understanding of the exact magnitude of hazards posed by IRE assumes national importance at this juncture of our history. IRE is the only DAE venture which has completed 30 years of operation, which incidentally is the average latency for cancer. Today, DAE is pushing forward its ambitious plan which involves a tenfold expansionof nuclear electricity generation by 2000 AD. Before allocating a massive Rs 22,177 crore from the public exchequer for the planned expansion, people have a legitimate right to look into the track record of DAE during the past three decades of its existence.

[This report is part of a book which is now at the design stage. This study is a joint venture by the trade union activists of IRE and TCC, Forum for Occupational Health and Environmental Studies, Alwaye, E P Mohanan and a group of students of Medical College, Calicut, and Krishnamohan, a scholar of environmental science at Jawaharlal Nehru University (JNU), New Delhi. The team acknowledge guidance and help by Gyanesh Khudaisya, D Banerji and Imrana Quadeer of JNU. Fraternal assistance from Nikolai Izmerow, Director, Institute of Industrial Hygiene and Occupational Diseases of the Academy of Medical Sciences of the USSR, Moscow, Ralph Nader and Joan Claybrook of the Critical Mass Nergy Project, Washington, and Anthony Mazzocchi, Directpr of Health and Safety, Oil, Chemical and Atomic Workers International Union is gratefully acknowledged.]

Notes

1 R V R Krishna Iyer, (1985): 'Nuclear Nationalism and the Law', *Philosophy and Social Action*, Vol XI, No 2, pp 9-19.
2 For the first time in the history, DAE released the annual average radiation exposure to workers of Tarapur Atomic Power Station (TAPS) on May 10, 1983 (See *Times of India*, Bombay, May 11, 1983). This release was in response to a detailed report by Praful Bidwai in *Times of India* dated May 9, 1983.
3 ILO (1983): *Encyclopaedia of Occupational Health and Safety*, Vol II, p 1882.
4 Ibid, p 1883.
5 ILO, (1983) ibid, Vol II, p 1679.
6 Concentration of sulphur dioxide and particulates in the area, measured by the National Environmental Engineering Research Institute (NEERI) is given in Table A.
7 Lissy Hospital and Medical Trust Hospital, Cochin are the Major hospitals which refused to co-operate without assigning any reason.
8 Gandharan P, ibid.
9 E P Mohanan a tutor in Trichur Medical College was present in many of these interviews. Statements involving medical judgments are his.
10 "Relative risk is the ratio between the incidence among exposed and incidence among non-exposed". See J E Park and K Park (1981), *Text-book of Preventive and Social Medicine*", Jabalpur, pp 279-280.
11 Albert, R E (1966): *'Thorium: Its Industrial Hygiene Aspects"*, Academic Press, New York/London, pp 58-64, quoted in Tandon, S K *et al*, (1977): 'Effects of Monazite on Body Organs of Rats' *Environmental Research*, Vol 13, pp 347-357.
12 Robert G Petersdorf, *et al*, (ed) (1983): *Harison's Principles of Internal Medicine* 10th edition, McGraw-Hill, p 319.
13 Ibid, p 318.
14 Government of India, Department of Atomic Energy (DAE) Annual Report 1978-79, p 38.

[*EPW*, March 8-15, 1985 in which the original article appeared is out of print. Copies of the article are available at Rs 10/- copy from: *The Circulation Manager, EPW, 284, Skylark, Shahid Bhagat Singh Road, Bombay 400 038.*]

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UPDATE

News and Notes

Bombay's Health Priorities

A LONG-STANDING criticism of health services, curative and preventive, private and public, has been that they are heavily urban-oriented and are skewed to offer the least assistance to those who need it most, the rural poor. What is often not as well documented is that the distorted priorities also influence urban health care. The annual budget estimates of the Bombay Municipal Corporation (BMC) recently presented provide a glimpse of just how efficiently the civic body is discharging its obligations of providing health care.

The corporation spends 29 per cent of its revenue budget on public health and medical services. Expenditure on health care has been steadily increasing—there has been a 69 per cent increase in the last three years. What is important, however, is that most of this increasing expenditure has been on the curative side. The health budget comprises three components—public health, medical relief and education, and measures to control environmental pollution. The proportion spent on public health has consistently, even if marginally, decreased—from nearly 15 per cent in 1977-78 to 13.7 per cent. A grave result of this is that neither the infant mortality rate nor the overall death rate has shown an improvement in ten years. Pollution control which includes such activities as air quality monitoring, research laboratories for analysis of pollution as well as an enforcement wing for ensuring the implementation of control measures, accounts for less than one per cent of the expenditure. Admittedly, the allocations in this area have increased many times in ten years, but considering that the BMC's own health survey has shown a definite link between the prevalence of a large number of health problems and air pollution, should this area not have been considered a priority area in health?

The corporation appears to be attacking the problem of health from the wrong end—waiting for people to fall ill so that they may be taken care of, instead of eliminating the root causes of ill health. The corporation is not alone in its apparently muddled understanding of these issues—every government, state and central, has followed the same principles of neglecting preventive health care. The reasons are, of course, obvious. The creation of imposing hospitals equipped with new equipment (even if they are ever put to use) adds to the prestige of the authority even as it offers temporary 'repair facilities' for the masses. However, expanding public health measures is quite another matter. In doing so, the state will necessarily have to confront the very classes which sustain it—whether it is a matter of properly distributing clean water supplies or bringing defaulting industries to book.

Even within curative health care, the services are so created as to provide the least access to the working masses. Hospital beds, for instance, show such a skewed distribution. In 1980, 60 per cent of the hospital beds maintained by the corporation were in city wards in south Bombay comprising 35 per cent of the largely better-off population; the civic body did not maintain a single bed in the area which 'houses' a large proportion of the working class population of the city. To make matters worse 67 per cent of the government beds are also in these south Bombay wards. The rest of the population (the lower middle class and working class) is forced in the city to depend on private medicare. Although the number of hospital beds has gone up since then, the situation is hardly better. As the municipal commissioner has pointed out, "we have undertaken the construction of many skyscrapers for increasing the number of beds in our major hospitals . . . while a large suburban population is denied immediate access to primary health centres".

Quite obviously, whatever the increases in the health budget, it is unlikely to benefit the urban masses. In fact, what with the commissioner's proposal to hike hospital registration charges, "restricting use of costly medical equipment" by introducing "reasonable charges" for their use and "avoiding waste of medicines and diet", users of municipal facilities will find the services gradually moving beyond their reach.

PP

Ruins of War

LEBANON is constantly reported for internecine fights, the shifting loyalties of the groups involved in the fights and above all Israel's repeated invasion of that country, the latest being in 1982. In the din of all this gunfire and among the ruins of war, the condition of millions of Palestinian refugees in Lebanon and in Israeli occupied territories of West Bank and Gaza has almost been forgotten. War itself has become an epidemic in the region and its impact on people's health is of epidemic proportion.

The fighting between the Palestinians and other armed groups which are from time to time supported by Syria, Israel or Iran, has almost destroyed the whole social fabric, and as a consequence even the health care services, in the Palestinian refugee camps. Even the abysmal health services which were available to them before the 1982 Israeli invasion of that country have almost ceased to be. For the last two years the Syrian-backed Amal Shite Muslim

militia has resorted to intermittent seizure of Palestinian refugee camps and thereby cutting the residents of all civil and medical supplies.

Chatila camp has been reduced to rubble and its population have fled south in search of food and shelter. In Bourj-al-Barajneh camp 35,000 people along with the British charity, Medical Aid for Palestinians are trapped. The electricity and water supplies to the camp are cut-off by the Amal militia. Food supply is not reaching the camp people. Anybody coming out in the street to get water and food or trying to leave the camp is shot dead. All relief supplies are turned back by the militia. Much of the medical facilities established by the MAP at the cost of £ 30,000, after destruction in the 1982 war, in the Gaza hospital, are destroyed including the hospital building itself. Another remaining hospital, the Haifa hospital, has lost two of it's there floors and there even medical worker's and patients have been hit by sharpnel. Because of such attacks on all these camps, it is estimated that almost 2000 camp inhabitants are killed, 4500 wounded and 80,000 made homeless.

A C J from

The Lancet, February 21, 1987.

Double Standards: Some Improvements

In the past dozen years, major pharmaceutical firms have made substantial improvements in the way they label and promote their products in the Third World. They are now less likely to puff up their claims to physicians and are more willing to disclose possible serious or lethal adverse reactions.

These are the findings of three researchers at the University of California School of Medicine in San Francisco (UCSF)—Milton Silverman, Philip R Lee and Mia Lydecker. This group pioneered comparative marketing studies beginning in Latin America in the early 1970s. Their latest findings were published in the October 1986 issue of the International Journal of Health Services.

Their original survey covered 147 products marketed in the United States, Mexico, Central America and South America and the results were published in 1974. In their second study, published in 1982, the UCSF group covered 515 products marketed in the United States. Latin America, Central Africa and Southern and South East Asia. Their present investigation includes 1,069 products marketed by about 300 companies in the United States, the United Kingdom and 28 developing nations.

The present study reports striking changes. Many of the firms were 'found to be showing more restraint in limiting their claims int he Third World to those which can be supported by scientific evidence and were far more willing to desclose serious hazards'.

In the case of dipyrone, a widely-used but reputedly dangerous remedy for fever and pain, itw as noted that 119 of 155 products now carry warnings of possible fatal blood damage. This represents a marked improvement over the situation in 1974 and in 1982. Most of the products still without such warnings were found to be marketed in India, Mexico and Central America, mainly by American and West German firms.

Of the 12 aminopyrine products, used for the treatment of fever and pain, seven—marketed by Polish, Spanish, Swiss and German firms—carried no adequate warnings of possible blood damage. Of the 15 phenacetin products which are used to control fever and pain, eight carried no warnings of possible kidney damage. They are marketed by American and German companies. All three of these products have long since been banned from the United States and the United Kingdom.

In the case of chloramphenicol, a valuable but potentially dangerous antibiotic used especially in the treatment of typhoid fever, 93 of 103 products now list warnings against use in trivial infections, against preventive use and against prolonged use. This too represents a remarkably improved situation. Nevertheless, some firms were found to be promoting chloramphenicol products in Indonesia, the Philippines and Thailand for such a minor illness as tonsilitis.

Similar improvement was noted in the promotion of tetracycline and other antibiotics, tranquilizers, anti-depressive agents and anti-arthritis drugs.

Silverman, Lee and Lydecker also examined the promotion of numerous 'sex tonics' in the Third World by various American, European and Third World compaies. These are widely recommended and sold for such indications as premature aging, sexual weakness, lack of physical and mental capacity, failing memory, fatigue and 'general wearing-out phenomena'. Evidence to support such use is questionable at best. None of the products is allowed on the market in the United States or Great Britain.

Drug companies cannot explain away these differences merely by claiming that the laws of a specific developing nation dictate what may or may not be put on the label. In the same country it was obvious that some brands of a particular drug carry detailed warnings, while other brands of the identical drug carry no warnings of any kind. Among the companies whose products were examined, some were based in capitalist nations, some in Marxist-Socialist countries and some in the Communist bloc. 'Our data show no significant differences between them inthe reliability of their promotion', the USCF team said. Among the profit-making companies, some were multinational while others were domestic or national. 'Our data indicate that most cases of irrational promotion involve domestic firms in the Third World'.

from *HAI News*, February, 1987.

Community Participation in Integrated Child Development Programmes

The Kerala Experience

v raman kutty

This paper, attempts to enumerate the obstacles that stand in the way of community participation in Child Development Programmes, drawn from the experience of Kerala state in India. There is also an attempt to provide a conceptual and theoretical basis to the need for community participation in health programmes.

IN this article I shall attempt to discuss some of the issues related to community mobilisation for action in child development programmes. The first part of the paper shall delineate the conceptual or theoretical basis for the need for community participation in child development programmes; the second part shall be devoted to examining some of the experiences in the light of these.

The first major task in such an attempt is to define the nature of child development programmes. Child development programmes grew out of two ideas:

1. The realisation that the development process has to be seen not just in its economic perspective.

Rajni Kothari says: "I suggest that the unidimensional and almost exclusively economic basis of the development paradigm has undermined the prospects for not just development, but for the sheer survival of large strata of the world's people. Mere transfer of resources and technology does not necessarily bring us any closer to the realisation of a desired state". (Kothari, 1985).

Among these 'extra economic' goals of development, child survival should certainly demand high priority. "High rates of infant and child mortality are one of the heavier burdens borne by the populations of the less developed world". (Barnum and Barlow, 1984). Hence even from an economic point of view, investment in child services—for health, literacy, and in general better quality of life for children—have returns in terms of quality of personal in later years that justifiy the investment.

2. The second idea—closely related to the first—is that of an integrated package of services for children. Most of the services offered have nothing now in their content: be it immunisation, supplementary feeding, promotion of breast feeding, or informal education. What is new is the integrated approach in supplying these services. But it should be realised that ". . .true integration must mean something other than the simplistic invitation of everybody professionally concerned with a problem, to do what they are used to doing in their sector specialities, with the only difference that they do it simultaneously". (Kunttson, 1985). Thus integration itself is to be seen as a strategic move, a specific input into the defence against deprivation.

The Child Survival and Development Revolution (CSDR) as envisaged by the UNICEF could be described as the fomalisation of all these ideas. The CSDR is—or should be—the ultimate goal of the integrated child development services initiated by many of the developing countries including India. But it should be understood that it is difficult to separate the process and the goal in this: the CSDR is both the objective of the programmes as well as their organisational content. The CSDR be said to be characterised by three principles in its organisation, each of which underscores the importance of community participation for its success:

(1) The 'demand based approach' to child health

(2) Low cost interventions that can be afforded by the poorest of communities; and

(3) Approaches with minimum technological complexity, so as to encourage self reliance. I shall examine each of these in detail.

The Demand Approach to Child Health

The central idea behind the concept of the CSDR is to enable parents to protect their children from preventable death and disablement: and the thrust of the strategy is to convert 'latent demand into effective demand' for child health. (Vittachi, 1984). What is the concept of demand for health? For economists, the demand is the "ability and willingness to pay". (Fuchs, 1968). Paying may not be always in terms of money. In an under-developed community, even when services are supposedly free, mothers have to forego one day's work to avail of these services, because of so many reasons that I need not go into. The value these sometimes illiterate and mostly formally unemployed women place on their time, is the cost of the service. In terms of relative value to the family earnings, this should be certainly a high value. The demand approach to child services in underdeveloped communities should mean, if successful, that mothers, who are the key figures in caruing for the children, are prepared to incur this cost in order to avail this service. Thus we see successful demand oriented programmes have a built in element of community participation.

But it is often not realised that what is demanded is not what is needed. The health or development needs of a community are those defined by the expert as those required for them to reach a certain predetermined level of development. In an ideal situation, health demands coincide with health needs. But more often, health 'demands' are in excess of or totally different from, health needs. There are two types of problems arising out of demand: demand failure and inappropriate demand. Demand failure in the context of child survival strategies means that mothers do not come forward to seek the protection of available services like immunisation, oral rehydration, growth monitoring, and even curative services. This problem is common in developing com-

munities, and is in turn due to two reasons: the illiteracy and ignorance of mothers and their lack of self confidence in decision making roles about children, which are themselves related problems. The second demand problem, that of inappropriate demand, is more common in developing communities like Kerala, where under the influence of high pressure advertising, educated but poor mothers reject cheap but effective alternatives and go in for child health inputs like milk foods, weaning foods, and tonics which they can ill afford. Both these problems, insufficient demand as well as inappropriate demand, exclude community participation in child development programmes: the first because people do not come forward to take part in the programme, and the second because they seek solutions elsehwere.

Low Cost Intervention

The second point of stress in the CSDR, and also important in ensuring community participation, is that the interventions suggested are less costly, which can be afforded even by the poorest community. In fact, "voluntareeism or community contributions are a necessary element in the cost structure if the programme is to be maintained on a national scale". (Nyix, 1984). We should define what we mean by 'cost'. What is apparently 'low cost' in terms of rupees and paise may be high cost in terms of time spent to a rural mother in a developing community. Here again, it is important to understand that in such a situation, community participation is one thing that can make costs less.

Inputs of Low Technology Complexity

The third point of emphasis is that the suggested interventions have very little technical 'density', in the sense of needing trained personnel and sophisticated equipment, in spite of being the fruit of modern thought. In fact, among the four key strategies currently emphasised in the CSDR—growth monitoring, oral rehydration, breast feeding and immunisation—the only intervention with any technological sophistication is immunisation. The central idea is that instead of becoming complex tools in the hands of experts in respective fields, these techniques become effective weapons in the hands of the community to combat threats to betterment of children's conditions. Thus theoretically, this should also have a strong component of community participation.

There are two reasons why I have gone into some detail to show how the child survival and development revolution is built around concepts which essentially entail community participation, by their very nature. The first is to build a conceptual background against which I shall examine some experiences with child development programmes. The second and the more important reason, is to make the point that while the three aspects discussed: demand orientation, low cost, and limited technology, are necessary conditions for community participation, they are not sufficient. If community mobilisation is to be truly effective, there should be a really participatory role for the beneficiaries at every stage from planning to implementation. I shall come back to this point in the last part of this paper.

In this part there shall be an attempt at examining some of the bottlenecks to community participation from experience of child development programmes in Kerala. We have witnessed a series of programmes operating at various stages, fulfilling different needs in child survival and development norms. The two programmes which shall be discussed here are the (i) the Composite Programme for Women and Preschoolers, which was in operation through balwadis (children's centres) in Kerala. Here the development department of the government of Kerala in conjunction with the health department, provided an integrated package of services to preschoolers and pregnant and lactating mothers. (Government of Kerala); (ii) The Integrated Child Development Services Scheme of the government of India. It was launched in 33 community development blocks all over India in 1975, and consequently grew to 300 blocks by 1981. In 1982 the ICDS was included as the principle vehicle for meeting the needs of children and their mothers under the twenty point programme of the prime minister. (Sadka, 1984).

Demand need variation: One of the most important flaws cramping the execution of such programmes is the design which is decided centrally and is usually inflexible. It is not often remembered that child survival goals, and hence demand as well as need differ widely in India, among states as varied as Kerala with its low infant and toddler mortality to that of Uttar Pradesh, which would approximate to the all India picture in these indices. Unfortunately this factor is not given due consideration in the programme, and the goals and style of functioning are decided without taking into account the regional differences in child survival and development priorities. As a result, aspects of the programme which are very relevant to some areas are totally irrelevant in others, and consequently cannot attract people's participation. This is a price we have to pay for inflexibility. Kerala being a state where the demand for formal education is very high, the age of school entry is five years, and pre-primary education is very much in vogue, it is not surprising to find many rural areas where even poor mothers are reluctant to send their children to the ICDS after four years. But in a state with a poor level of formal schooling, the non-formal education imparted in the ICDS centre till six years may be an important input which cannot be ignored.

Rigid structure: The second and very important aspect which precludes community participation is the rigid nature of the programme implementation. The beneficiaries have no role in deciding the site, or number of functionaries at the local level. Here it is interesting to contrast with the CPWP programme which is now being eclipsed by the ICDS. The design of the CPWP was such that in each area, the people had to form and register a mahilasamajom (women's club) which had to provide the building, premises and local level functionaries for supplementary feeding and other child development programmes. There was also an attempt to provide the local type of food and grow some of the vegetables in the premises, coupled with many employment generating activities for women, like goat rearing etc. This character of participation has been lost in the design of the ICDS. This

is also a particular example of the point raised earlier, i e, whereas in other states of India one should not expect women to take the initiative to run their own community development programmes, and hence a government administered programme might perhaps act as a focus for initiation of such activity, the opposite is the case in Kerala. In Kerala women do have the confidence and initiative to run these programmes, perhaps borne of their better literacy and exposure to media, and as such the programmes should be sufficiently flexible to allow their participation. This would be expected of a demand-based approach, and would simultaneously ensure community participation.

Goals for beneficieries and goals for functionaries: The point is again related to the first two. When a programme becomes centrally administered with a fixed pattern and permanent staff, it is inevitable in the long run that the executives of the programmes, on the whole, put their own personal goals first. This is a folly to which it is particularly susceptible in Kerala with its large number of educated unemployed. While it should not be grudged that such programmes have provided jobs for a number of youth it should not also be forgotten that furthering their career opportunities is not the primary aim of the programme. This point has been at the back of many recent incidents in Kerala. This is an area of conflict, which, unless resolved, effectively blocks people's participation in the programme.

Not identifying priority needs: Sometimes a community may be badly in need of a service, like protected water supply, or irrigation facilities, which, while not directly linked to child health needs, can act as a rallying point from which child development services can reach the people. Unfortunately, this aspect of community development has not been given its true importance in the programme. This is another obstacle on the way to better community participation.

Emphasis on technical aspects: There is a tendency on the part of the experts concerned with planning and implementation of the programme, especially medical personnel, to see it as exclusively a technical programme. Doctors connected with the programme should be disabused of the idea that it is a medical programme. On the other hand it should be seen as a non-medical programme with health returns. From the side of beneficiaries, there is a tendency, at least in Kerala, to view the ICDS as a formal preschool education. This is to be expected in a state where mothers put such a high value on formal education even at the pre-primary level. Here again, it is an instance of demand conflicting with need, and unless people are properly appraised of the objectives of the programme, there is a danger that they shall be disillusioned and this will effectively block their participation.

Using the programme for political leverage: It is inevitable in a highly politically-conscious state like Kerala, with political fortunes see-sawing, that programmes like the ICDS are used for political advantage. If this should happen, it alienates a large section of the community and this works contrary to the spirit of community participation.

In summing up, I should point out that child development programmes indeed have a large potential for community participation in their design and execution. In our experience, a large part of this potential is fulfilled. In fact, it would not be wrong to state that the ICDS is one programme in in the state with a large element of community participation even as it stands now. I have only tried to point out areas of conflict, the resolution of which is a must if we are to go further.

Coming back to conceptual basics, community participation in child development programmes fails if community participation itself is not seen as a primary objective. Participation should not be a means to facilitate reaching other goals. On the other hand, maximising community participation should be the primary objective, subject to the constraints. If this approach is adopted, reaching the other goals will be much faster and automatic.

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(Continued from p 115)

nuclear mind-set of those who are in a position to take crucial decisions concerning nuclear war and the arms races.

While local and regional peace movements can play a vital role in promoting the *process of disarmament and sustaining its momentum, a world completely* and *permanently* safe from the fear of nuclear weapons cannot be created by movements against nuclear weapons alone. Such a world requires transcending nationalism and national elites in the name of the universal interests of human kind. In short the struggle to create a truly and permanently nuclear free world is an intrinsic part of the struggle for socialism. Without a nuclear free world there will be no socialism. Without socialism there will be no nuclear free world!

Milk Monitors

pauline jackson

Methodologies for the Study of Low-Level Radiation in the Midwest, Charles Huver *et al*, Millville, MN, Anvil Press, 1979, $ 5.

THOSE who seek an easy introduction to the dangers of low-level radiation would do better to read the pamphlet-length summary of this book, *Nuclear Waste - The Time Bomb in our Bones.* Yet this extraordinary book is undoubtedly a landmark contribution to the debate over nuclear health hazards. It is a product of detailed investigation by a team working with Land Educational Associates Foundation Inc. (LEAF), a citizens' research and resource network who publish books, newsletters, engage in lobbying and popularise research findings for anti-nuclear activists.

This book appears to be their most ambitious attempt yet to take on the state at its own game: the monitoring of low-level radiation releases and their impacts on human beings. Their work is intended as a critique of the U.S. Environmental Protection Agency, the U.S. Atomic Energy Commission and those private or public agencies who, in the opinion of the authors, downplay the hazards of low-level radiation. Their starting point, therefore, is an alternative method of monitoring the results of low-level radiation release, to combat the defects, errors, inadvertant omissions and mistakes of official monitoring.

Their approach assumes that the problems surrounding monitoring can be reduced to precise errors, definite defects, certain omissions and accidental mistakes - an assumption that is far from proven in the book. Certainly, the authors succeed in revealing an inadequacy of corporate and state monitoring. But they present the inadequacies more as a series of random and accidental oversights than as a concerted strategy by supporters of the nuclear industry to misinform the public.

Huver *et alia* are critical of monitoring methods but not of monitoring as such. They would not go so far to argue monitoring for low-level radiation (or low-level toxic chemical exposure) has become a fetish of the chemical and nuclear industry, used to lull the public into believing that a quantifiable measurement is equivalent to quantifiable control over releases (as argued by Levidow and Pomata in *RSJ 9*). On the contrary, the authors accept monitoring and seek its extension and perfection by a more sensitive, all-encompassing methodology.

To illustrate their perspective: an example cited in the study is the frequent use by nuclear proponents of the idea of 'the average dose' of low-level radiation, which gives an 'average' population a once-off hit of radiation and then allegedly disappears. The authors expand at length on the inadequacy of monitoring which fails to test for the consequences of all 189 radionucleides which can have an impact on health, with tragic consequences in cancers of specific organs of the body of individuals. The monitoring of selected radionucleides can be attributed to an inadequate methodology, or it can be conceptualised as a deliberate attempt to conceal health hazards, that is,as a political choice by state and corporate scientists to hide health risks from the population. If all 189 radionucleides were monitored and the results rendered public, this would imply that the nuclear industry and its state supporters did care about health - an assumption that proved fatal for nuclear activist and trade unionist Karen Silkwood, who was assassinated while attempting to prove the hazards generated by her own nuclear workplace.

The LEAF study provides some useful insights into milk monitoring techniques. Milk monitoring had been going on for years in Wisconsin, where the research team was based, so records of the results were available from various monitoring stations over a period of years. Examining the records, they found evidence of radioactive substances which could only have come from atomic fallout during the 1950s. Matching the peaks and drops in measurements with information in tests carried out in the atmosphere, they demonstrate the continuing impact of radiation on a population who were perhaps only children at the time of the test. They suggest a method of calculating the half-life of radioactivity still in the bones of adults who were exposed at the time, and who would be vulnerable to cancer today.

The authors were surprised to find that the records were blank for considerable spans of time. In some records, the same results from monitoring appear on consecutive readings, from which they surmised that NO monitoring of milk had been carried out during certain periods, while on others the results of the preceding tests were copied into the records. In addition, monitoring results of *no* radioactivity were to be found in the Wisconsin records. This provides the authors with an occasion to disect some arguments around 'detectable levels' of radiation. In this regard they remark: "...it is obvious that realistic dose estimate cannot be attempted by assuming that concentrations below a "detectable level" must be interpreted as meaning that absolutely NO iodine-131 is present" (pp. 61-62).

The statement reveals a weakness in their analysis of the purpose of monitoring in the first place. If the purpose of monitoring were to reveal the presence of radioactive substances in the milk, exact and precise measurements (however miniscule) would no doubt have been recorded. If the purpose of monitoring is to detect low-level radiation at and above the 'safe' threshold levels, then there is no need to record tiny amounts of radiations, since such tiny amounts are presumed by the monitoring agencies to be safe. The milk monitoring records which appear so defective in the eyes of the researchers are undoubtedly very adequate from the standpoint of the agencies doing the monitoring, since the test results conform to their intention in monitoring: to prove

that radioactivity in milk is not at harmful levels... levels being the crucial word!

Not content with combing the state's radiation monitoring records for faults, the authors compare nuclear reactor manager and state interpretation of the results with their own interpretations. They note that nuclear reactor utility managers and owners managed to underestimate the results of the monitoring by half. The researchers attribute this underestimation to the use of formalin, which reduces the detectability of the radionucleide Iodine-131. Being cynical, one could also attribute the underestimation to dividng the original results by 2...

The study is extremely useful in its treatment of the food cycle and low level radiation exposure; this is perhaps the best section of the book. The authors insist on the importance of the food chain as a pathway for low-level radiation ingestion. The researchers examined the dietary patterns of the Wisconsin population, including the diet of so-called minority groups. In an implicit critique of the 'average' population perspective, they detail the differences in life-style among the Wisconsin population and the accompanying variations in eating and shopping habits. They calculate the predominance of dairy products in the eating patterns and then break down the dairy products according to whether or not they were extensively processed. They propose that those who eat processed (as opposed to fresh) dairy products were less likely to get radiation exposure, since the half-life of the radioactivity in fresh milk, for example, had had more time to decay during the processing.

If one hadn't been turned off dairy products by this stage, worse is to come in their assessment of other food products. The consumption of wild berries, foods growing in marshy areas and wild venison were extremely popular in Wisconsin. The topography of Wisconsin—with its snowfalls and extensive marshy, lichen and moss-maden lands—is apparently conducive to the establishment of radiation pathways. Animals and foods with their sources in these terrains are more likely to 'carry' radioactivity from previous fall-out than other foods. Poaching of venison is so popular as to make venison a staple diet for many Wisconsin families; the deer graze on the marshy lands close to the areas of the state with the highest concentrations of Wisconsin residents who are either vegetarian, fresh-food conscious or opposed to processed food, the authors point out the radiation hazards of diet containing berries, unmilled grains and soyabean. Not even sunflower seeds escape their scrutiny as concentrators of Strontium-90! Combining factors - of diet, age, proximity to nuclear reactors, waste facilities for reprocessing nuclear materials, age when testing was being undertaken - the authors attempt to devise a methodology for examining the radiation exposure already received by the population of Wisconsin and the amounts that are still decaying in their bones from previous exposures as the half-life of radioactive substances continues to decay over decades. Their methodology resembles that used in sociology and psychology for multi-variable factor analysis.

In the absence of a chapter presenting the authors' scientific assumptions or philosophy of science, the reader is obliged to deduce for her/himself where the authors stand on monitoring, research methods, source credibility, statistical methods and so many other fundamental issues. One can draw some conclusions from their concern to enlarge the numbers of radionucleides and radiation pathways which are submitted to monitoring and their interest in the impacts on individuals in specific geographical zones, districts with distinct living and eating patterns. Their work rejects hypothetical models of the impacts of low-level radiation on 'average' populations and attempts to reconcile multiples, types and volumes of radiation emissions with groups living in their path or liable to consume radioactive contaminated foods along their pathways. Put another way, the authors reject a robotic conceptions of human beings - robotic in the sense of each person being an exact replica of the next in history, culture, lifestyle, age and so on. Instead they are attempting to humanise monitoring methodologies, to give them relevance to local communities, such as those living in the various counties of the State of Wisconsin.

It is to the credit of LEAF that they responded quickly to popular demand by publishing in pamphlet form a most readable summary of the book: *Nuclear Waste - The Time Bomb in our Bones.* Besides this 16-page cheap version of the book, LEAF have 3 informative brochures presenting the salient aspects of selected pieces of their research, aimed at Wisconsin's commune and health-food population. These formats - pamphlets and brochures - show that LEAF is capable of citizen research which unites grassroots activists and researchers into dialogue. It is all the more surprising, therefore, that *Methodologies* does not rise to the same standard of accessibility as thier other publications.

It is all the more important to have an accessible presentation of their philosophy of science when one realises the conclusion that Huver *et alia* draw from their research. They predict that Wisconsin 14 year-olds have an increased risk of cancer from just 3 radionucleides in their food - a risk double or more than the normal cancer risk. They predict that 14 year-old Wisconsin girls have an increased risk from all cancers equivalent to 25 per cent above the normal cancer risk. The authors remind us:

> Some of the Strontium-90 that found its way into baby's milk bottle in the early 1950s is still in the cells of that individual. Every year it delivers an additional 'annual' dose. Every year it increases that individual's risk of cancer (p. 168).

The risk of cancer and the suffering it implies for individuals is all the more astounding when one considers that, by the time these 14 year-olds become middle-aged, they may never have been near a nuclear reactor, may live on another continent, may never have worked in the nuclear industry and may imagine themselves safe from exposure. LEAF is saying that the damage has already been done. Low-level radiation is inside the environment of Wisconsin and cannot go away. In the words of the authors:

> It has been 'lost on the way to the bank' - it is irretrievable - it will never be safely contained in some ultimate waste storage repository. It will inevitably affect the health of individuals in the Wisconsin case study and others yet unborn (p. 179).

For authors of *Methodologies* there is no 'return to normality' after a reactor closes down or after testing halts. Low-level radiation still continues its assault on the cells of in-

dividual humans. For this protracted notion of war against radiation hazards, this book's contribution to the literature on low-level radiation is a welcome addition. For those who seek a critical analysis of monitoring as a tool for politically cooling-out agitated residents and citizens, this is not the text to peruse. But it could serve as a useful reference source for the wider debate about disinformation techniques employed by the nuclear industry and its supporters.

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(Reprinted from *Radial Science Journal*, Issue on 'No Clear Reason' 1984.)

Hunger and Myth of Plenty

bernard d'mello

Empty Stomachs and Packed Godowns: Aspects of the Food System in India by Bharat Dogra; published by Bharat Dogra, D-7 Raksha Kunj, Paschim Vihar, New Delhi 110 063; 1987, pp VIII + 126, Rs 50.

THE stock of foodgrains in India has increased from 11.7 million tonnes in 1980 to 29.2 million tonnes in 1985. However, this huge stock of foodgrains is not an indication of plenty. Rather, it is one of the symptoms of lack of purchasing power of the poverty stricken millions who suffer from hunger and malnutrition. Bharat Dogra, a free lance journalist, presents a radical outline of the food problem in India.

More than 70 per cent of rural households lack the means to avail of even the least-cost balanced diet as recommended by the Indian Council of Medical Research (ICMR), which is the bare minimum ration. According to the author, the landless labourers and peasants operating upto one hectare of land, who constitute 47 per cent of the rural agricultural population, experience hunger and malnutrition in the most acute form. In several villages where land is infertile and in highly drought-prone areas, peasants operating more than one hectare of land also suffer from acute hunger and malnutrition. The single most important cause of hunger and malnutrition is inequality which deprives a majority of the population of access to resources which can be employed to produce food or yield an income for purchasing food.

Is India self-reliant in food? Self-reliance in food is defined as the ability to produce adequate quantities of all the food items which are part of the diet of our people and are an important source of nutrition for them. The ICMR has worked out the per capita requirements of basic foods for different age groups doing different types of work. This is multiplied by the total number of people in these age groups doing different types of work and summed up to get the requirements of basic foods at the national level in India.

Domestic production falls short of requirements in cereals, pulses, milk and oils and fats. Large quantities of edible oils and dairy products are imported. Besides large quantities of inputs used in the production of food like fertilisers and pesticides are imported. Thus india is not self-reliant in food which is contrary to what is being claimed in official quarters.

On the other hand, agribusiness promotes a massive wastage of food. In its ruthless search for profits, it ignores and hinders the basic task of making nutritious food available to a majority of the people. For instance, the loss of nutritious ingredients in the course of milling of rice and hydrogenation of edible oils.

A few regions produce a surplus of foodgrains (e g, Punjab and Haryana) while others remain deficient (e g, Bihar, Madhya Pradesh, Orissa and West Bengal). Similarly some crops have performed reasonably well (e g, wheat) while production of some others have relatively stagnated (millets and pulses). The per capita availability of millets (jowar, bajra, ragi etc), the food of the poor, has been declining. The production of pulses (chana, urd, mung, kulthi, masur etc), the poor persons protein, has stagnated. The biggest failure of the green revolution is the failure of high yielding varieties (HYVs) of rice. HYVs have failed to give the promised and much publisised higher yields despite the application of high amounts of fertiliser and irrigation water. The main reason for this failure is the high pest and disease susceptibility of the new HYVs relative to the resistance to disease and pests of the older varieties.

There is an interesting chapter on the long term adverse environmental effects of the green revolution development strategy in Punjab. The growth of legume crops (e g, grams) in rotation with cereal crops and inter-cropping practices used to be beneficial for maintaining the fertility of the land. However, during the green revolution period, the area under pulses went down from 13.4 per cent of the total area under crops in 1966-67 to 3 per cent in 1982-83 and the area under oil seeds has gone down from 6.2 per cent of the total area under crops in 1966-67 to 2.6 per cent in 1982-83. There has been a greater reliance on chemical fertilisers for maintaining the fertility of the soil relative to the use of crop-rotations, inter-cropping practices and dung. This tendency to rely more on chemical fertilisers for maintaining the fertility of the soil relative to other better and cheaper methods has been criticised by ecologists and other specialists. Thus Francis Moor Lappe and Joseph Collins write in their classic, *Food First* that "The more one relies on chemical fertilisers instead of manure, compost, crop rotation and green manure, the more the organic matter declines, the less able plants are to absorb inorganic nitrogen in chemical fertilisers. This helps to ex-

plain why US agriculture, according to biologist Barry Commoner, now uses about five times as much fertilisers it did in 1947 to produce the same amount of crop". In fact, the Punjab State Planning Board in a perspective plan for agriculture (1980-2000) notes that the heavy reliance on wheat-rice rotation has "upset the ecological balance of the state and the agro-ecosystem has become fragile".

In a country where purchasing power is concentrated in the hands of a small proportion of the population while the masses lack purchasing power, the rich spend extravagently on expensive food while the poor cannot even purchase essential foodgrains. The consumption of barley, used by the poor either as flour for making 'chapatis' or as parched grains to make 'sattu', has been declining. Instead barley is being diverted into the preparation of malt for producing beer, whisky, candy etc. The organisation of the milk trade has changed significantly in many areas. In earlier days when marketing of milk was not so extensive, a lot of milk used to be converted to ghee at the village level. A nutritious by-product called 'chaach' obtained in the process was consumed by the poor. Now, with extensive marketing facilities for fresh milk, lesser ghee is produced within the village and consequently the poor are deprived of 'chaach'. Thus, the poor are deprived of a significant share of milk-related proteins while chocolates and ice-creams are produced for the metropolitan market.

The export of rice, is clearly an undesirable trend. The existence of a 'surplus' stock is no reason for exporting especially when millions of hungry and malnourished people are deprived of adequate amounts of this staple food. Instead largescale employment generating programmes like soil and water conservation and afforestation could be launched.

India is the fourth largest exporter of tobacco. Tobacco not only takes up land that can be used to grow food crops but it also destroys the fertility of the soil. Export of fish and fish preparations has increased from 33,000 tonnes in 1970-71 to 90,000 tonnes in 1984-85. Capital and technology has been imported for deep sea fishing to step up exports, bypassing the protein needs of the poor local people.

The author outlines the elements of a solution, towards satisfying the nutrition needs of the people which include the implementation of radical land re-distribution special attention to forest conservation, and a revaluation of traditional farming practices. These measures will face formidable opposition from the ruling classes. Thus they can succeed only as part of a wider struggle for social, economic and political emancipation of the oppressed.

The book is a competent, radical overview of the food system in India. The author however focusses on the problems of hunger and malnutrition in rural India, but the urban situation has not been dealt with adequately.

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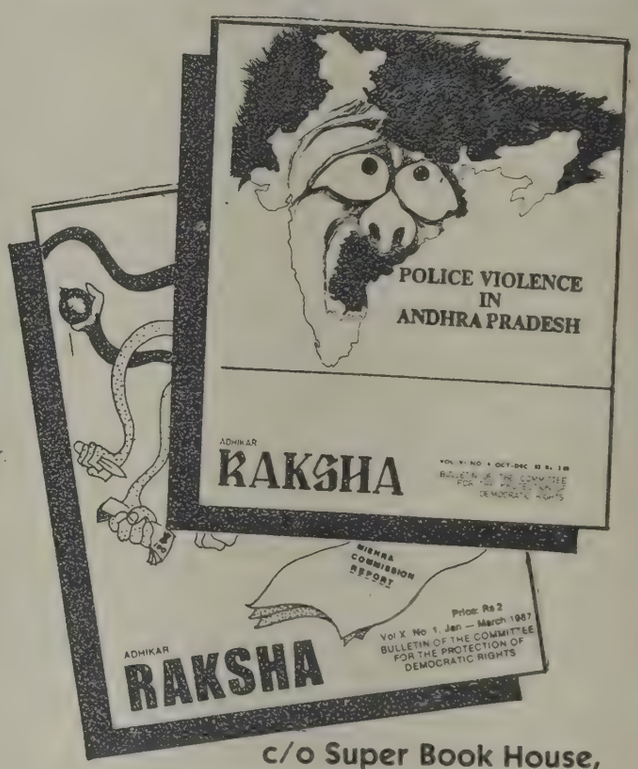
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Vaccine Production in Private Sector

A Comment

r s dahiya and peeyush sharma

THE new drug policy was announced on December 18, 1986. The total thrust of the drug policy is antipeople—the prices of various drugs will increase substantially (50 per cent to 300 per cent). Also, the new drug policy has given undue concessions to foreign multinational drug companies and monopoly houses of India. The small and medium manufacturers along with public sector will get a set back with this new drug policy. Its above impact can be understood with one example.

Earlier all the vaccines were being manufactured by the public sector in India. There may be multi-factorial reasons for these vaccines being in short supply, but in whatever limited quantity, these were being provided to the general public free of cost in government hospitals.

One example can be taken that of antirabic vaccine. There have been many reports in newspapers about the short supply of these vaccines in governmental hospitals. The reasons of less production and lacunae in regular supply have not been thoroughly evaluated. The new drug policy has given the option to private companies to manufacture these vaccines.

One of the companies Behring Biologicals, a division of Hoechst India Limited has come out with an antirabic vaccine with a brand name of 'Rabipur'.

The various advantage of this vaccine over the already produced vaccine by public sector are documented as follow:

— New generation tissue culture vaccine.
— Potent.
— Safe.
— Economical.
— It is to be given intramuscular instead of intraperitoneal. The dosage is one injection on each of days 0, 3, 7, 14, 30 and 90 (hence less drop out).
— Rabipur should be stored protected from light at +2 to 8°C.
— Cost of 1 ml. is Rs. 100 whereas total dose is 6 ml. Thereby cost is Rs. 600 for one patient.

New certain questions can be raised.

How is it economical?

a) Its cost is Rs. 600 for one course whereas the cost of vaccines manufactured by public sector is Rs. 40 per vial, whereas this was given free of cost in the government hospitals.

b) Moreover immunoglobulins are also recommended along with Rabipur injections which entail further cost of Rs. 300-400.

c) Even a lay person can understand how far economical it is! Of course it can be said to be economical when the cost is, compared with other brand names where cost is Rs. 2100 for one course.

Is it potent and safe?

The advertisement pamphlet reads as under:

1. Slight reactions at the site of injection such as pain, erythema and swelling may occur in less than 5 per cent patients.
2. Isolated instances of lymphadenopathy, headache, lethargy, slight elevations of temperature and allergic reactions of skin have be reported.
3. No experiences are yet available with regard to administration during pregnancy.
4. This should not be used where there is a known allergy to neomycin, chlortetracycline, amphotericin B, or chicken protein. Prophylactic vaccination should not be undertaken.

The above statements made by the company themselves raise many suspicions.

1. Is the vaccine really as safe as claimed?
2. Will this be experimented on pregnant woman in India as many other drugs are being experimented. Does the company consider that Indian pregnant women are guinea pigs?
3. The only thing which is an improvement is that the route of administration is intramuscular rather than intraperitoneal but as the number of abscess formation in S/C or I/M immunisation is increasing who knows what will be the percentage of abscesses with this I/M injections.

The new drug policy by opening vaccine manufacture to private firms will only cater to the needs of those who can pay Rs. 600 to Rs. 2000 for simple antirabic vaccination.

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Myth of Alternative Medicine

thomas george

THE so-called 'radical perspective' of medicine has many degrees, but all of them agree that modern medicine is more or less bad, ineffective and expensive while traditional medical systems are projected as a sort of magical remedy to all health problems. This view has gone into the folklore of self-proclaimed 'radical' writers and has been repeated ad nauseam, without discrimination of scientific examination. A close look at this concept reveals several fundamental flaws; to the extent of making it a reactionary rather than a radical view point.

In the first place, the glorification of traditional systems is utopean and unrealistic. To keep recalling bygone 'golden ages' is fruitless. The fact is that at the present time, all traditional

systems of medicine are primitive and ineffective in comparison to modern medicine. To call for research in these systems is one thing, to project them as qell-developed, near-perfect systems is quite another. In fact, the whole business of counterposing modern medicine and traditional systems, of making them appear antagonistic and mutually exclusive has no basis in reason. Any scientific system will incorporate the results of research and any boundaries are artificial and foreign to scientists. These boundaries definitely do not serve the cause of science and are of use only to vested interests who make a living out of such divisions. When one comes down to the nitty-girtty and asks for a point-by-point delineation of the ways in which traditional medicine is superior, one comes up, not against a wall, but against a mass of fluff—vague statements about being closer to the people, arising out of their milieu etc. When one is sick, it may be reassuring to see one's grandmother but far more effective to see one's doctor! All this boils down to saying that promising lines of enquiry in any system should be subjected to rigorous scientific research and the results integrated into the knowledge available in health care. To rigorously demarcate 'systems' is ridiculous, wasteful and unnecessary.

On the question of cost also, one finds that the idea that ayurveda, siddha or unani is cheap, an idea that the 'radicals' have been trying to ram into our minds, is far from true. These systems as they now exist are expensive, often more so, than modern medicine. In this context it is surprising how self-proclaimed socialists make such a fetish about cost. The ultimate aim of a socialist system is to provide the best life for its citizens, not the cheapest. In fact it is interesting that emphasis on traditional systems finds so much favour with foreign aid agencies, many of them wings of multinational companies, doing business by other forms. One possible reason for this favour is that giving respectability to all the quacks in the countryside is a cheap way of preventing rural people from demanding better health care. To provide really good medical care of the quality available in the west would be expensive. How much easier to give the shadow—and go on a propaganda campaign to pass it off as better than the substance! And it is this very ludicrous propaganda that the 'radicals' have swallowed. They have now put themselves in the silly position of saying that the best is too good for the poor, that they should have only what they are accustomed to—quacks and magic remedies!

The talk of community health and the attempt to produce non-existent antagonism between preventive and curative services, is all part of the attempt to cloud the real issues by posing symptoms of the disease as the disease itself. To cover up the lacunae in the health services and the wocfully inadeqauate budget spent on it by the expedient of posing it all as a problem of priorities is nothing short of criminal. And when 'radicals' accept this kind of solution, they in effect accept that the health budget is adequate, its all a matter of more judicious spending, they accept that the best care is impossible; attitudes that are not only defeatist, but a grotesque travesty of the truth.

The true radical viewpoint on health would be that the most scientific and effective system should be available to all irrespective of cost. One can accept compromises in the interim period towards achieving the goal, but any attempt to pass off the compromises as better than the goal itself should be stoutly resisted. We cannot accept second class care as good enough, for the poor. It is the duty of every democracy to provide the best in all fields for all its citizens and this is the objective for which we should fight.

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ADVERSE EFFECTS

Women and the Pharmaceutical Industry

Edited by Kathleen McDonnell

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PHYSICIAN'S OATH
AND
STATEMENT OF MEDICAL ETHICS

(Adapted for the nuclear age)

Over the millenia
physicians have evolved a long tradition of ethical affirmation,
represented originally by the Oath of Hippocrates, and later
by many other national and international codes and
statements of professional ethical obligations.

Recently in May 1983

the World Health Organisation General Assembly stated that,
'nuclear weapons constitute the greatest immediate threat
to the health and welfare of mankind', and that physicians
'have both the right and the duty to draw attention
in the strongest possible terms to the catastrophic results
that would follow from any use of nuclear weapons.'

To our long tradition of ethical statements
we believe that there should now be added:
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that nuclear weapons have presented my profession
with a challenge of unprecedented proportions,
and that a nuclear war would be
the final epidemic for humaking.
I will do all in my power
for work for the prevention of nuclear war."

Proposed at the Third Congress of International Physicians for the Prevention of Nuclear War. The Hague. June 17-21. 1983

Vol. II June-September 1987 Nos 1-2

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Technology in Medicine

SOMETHING is tearing apart the noble mask of medical practice. A gigantic force is shaking its traditional independent status. Some say that machines are the culprits—they have made medicine invasive, costly and impersonal. Some are concerned about new the organisational set-up—bureaucracy is the devil, large size is wasteful, so 'small is beautiful'. Undoubtedly, the introduction of new machines in medical care has not only made medical technology visible, but also made it an independent issue for discussion and for evolving alternative practices. They have also widened the scope of discussion by naturally making it open to people other than doctors. Ironically, while monopoly capital has introduced them into medical care, they have made a dent in the monopoly of doctors to discuss medicine.

Medical technology, to use a broad definition includes drugs, devices and medical and surgical procedures used in medical care, and organisational and support system within which such care is provided. This definition is applicable to all systems of medicine. We, however, restrict ourselves to allopathy. For allopathy is the dominant medical system internationally, it has an organic link with capitalism—the dominant socio-economic system—and above all, we have insufficient information to correctly understand the role and nature of technology and emerging trends of technological change in the context of capitalist development in other systems of medicine.

While discussing new and recently-developed medical technology—for that matter all such technologies—we need to recognise that most of them are not developed by the application of advances in the basic sciences in one field. New medical technologies are not only founded on the developments in the basic sciences in medicine alone, but also on the combination of this with developments technologies in other fields. For example, the cardiac pacemaker was developed by using advances made in solid state physics, developments in vaccum technology, electrical engineering as well as in anatomy and cardiac physiology, and surgical techniques and development of silicon rubber and epoxy resins.

Though on the face of it a technology seems to develop out of the accumulation of scientific and technological knowledge and skill, this accumulation is encouraged, discouraged and selectively manipulated in the socio-economic context. Further, the diffusion for widespread use of any technology is determined by these forces. In the case of medicine, the flow of capital into the medical service sector and the concommitant organisational maturity of medical care system provided an objective basis for widespread diffusion of new medical technology in the advanced capitalist countries.

Penetration of Capital into Medical Services

Medical care is predominantly organised as (1) individual and group medical practice which has its roots in the petty commodity production in which the physician owned his/her skills as well as essential tools, (2) organised hospital-based medical care which has traditionally been charitable, state-financed or owned, or non-profit voluntary. Historically, though health care particularly, its public health component was recognised as an essential economic function as early as the mid-nineteenth century, the penetration of private capital and consequent capitalist industrialisation of technological components of medical care took place much later. This was due to the specific place of the service sector in the capitalist economy. Services of all kinds, including medical service, rendered as a commodity or otherwise, are essential to capital to revitalise, reproduce and even improve labour power. But they do not in the process of actual rendering of services, produce surplus value. Capital on the other hand, flows naturally into the surplus-value producing sectors of economy.

Therefore, the initial penetration of capital into the medical service began into those technological components of medical care—notably the tools of the physician—which could be converted into commodities containing surplus value. Thus, the physician who was a petty commodity producer gathering herbs, chemical, etc, and compounding them into medicine to dispense it to the patient, was gradually alienated from these tools. The doctor became dependent on the supply of that tool (medicine) from capital. The doctorl no longer remained an independent petty commodity producer, although he/she did retain the character of the individual private medical practitioner. The latter characteristic was not radically affected because the doctor retained the exclusive knowledge and skill of prescribing drugs produced by the industry. The doctor still remains indispensible for sale of (and realisation of the use value of) the commodity drug. Therefore, doctors are the most important target in capital's market strategy. For this purpoe it is necessary that the doctors identify with the interest of capital. The common method used for such purpose by the industry is ideological, combined with material incentives. In the situation of intense competition, the industry consciously promotes irrational use of drugs and the use of useless drugs. This interest of the industry is well-reflected in the doctors irrational prescription practices. Indeed, once the doctor became the last executor of capital's market strategy, irrationalism was bound to dominate medical practice.

The rise of monopoly capitalism and the changes in its dynamic during and after the second world has provided objective basis for further technological changes in medical practice. In late monopoly capitalism there is a continuing compulsion to increase the rate of surplus value, to valorise the excess capital by investment in any possible area (such as armament, services, etc) and to lower cost of production through mechanisation and automation. In this situation, one of the best ways to preserve monopoly market is to accelerate technological innovation and consequent rapid introduction of new products in the market. This creates a situation of permanent technological and product renewal. This also creates a permanent need to dispose of obsolete technology and the product to the less developed countries (hence the slogan of technological transfer, albeit in neo-

colonial ways). It is this characteristic that is primarily at the root of continuous introduction of new drugs, devices and hosts of other things, irrespective of actual medical needs and priorities of the people, into medical practice.

Mirror effects of these developments are also seen in a third world country like India, due to neocolonialism as well as due to the needs of indigenous capital. The economic backwardness of the country puts certain limits on the extent to which capital can penetrate medical services sector and new medical technologies can be brought to widespread use. However, these limits are not absolute. Nevertheless, the forceful entry of new medical technologies has created forces which are transforming individual medical practice as well as hospital care much more extensively than the proportionate economic value of such technologies.

Recent Technological Changes

Since the late 1960s after making its initial impact on the production of drugs, the logic of late monopoly capitalism started affecting other medical technologies. Within a decade it unleashed a massive assault on medical care with a plethora of new diagnostic and treatment devices. Not only have new technologies entirely taken over the essential functions of doctor in a medical care but aids him/her in performing those functions. (They also create new functions.) In the process each function becomes a specialised one as it needs the aid of a special, complicated and costly machine. Thus a rapid division of diagnostic and treatment functions takes place. These changes in medical care also accelerated certain changes in the way medical care is traditionally organised.

In the sector of individual private medical practice many new private practitioners with technological spaciality were added. Indeed we have come a long way from X-ray clinics to CT scan centres. The proliferation of diagnostic centres run by individuals, institutions or companies has lengthened the route which the patient travels in order to get diagnosed and treated.

The accelerated fragmentation of functions has further impersonalised medical care. The business nexus of generalists, specialists (medical), specialists (equipment), diagnosticians and what not have expanded the naked play of market forces (with the attendent corruption and irrational medical practices) in medical care. No wonder all these escalate the cost of medical care.

In hospital-based medical care too far-reaching changes have unfolded. Fragmentation has increased the number of departments. New equipment and procedures have led to a new division of labour inside the hospital. The need to coordinate all such activities has given rise to such bureaucratisation that even many old styled but business-oriented doctors have started feeling uncomfortable. The costly requirements like controlled environment for equipment, posh premises to match the high cost of services, etc, make hospitals a huge investment. Thus the gradual conversion of traditional non-profit and charitable hospitals to for-profit and fee-for services hospitals is inevitable, though this is at different stages and in countries where state services are there, it is generating powerful forces for privatisation.

These changes are also accompanied by another significant development. Capital for the first time showed interest in going beyond the production of drugs and devices to organising hospital based medical care in line with industry on a large scale. Investor owned or corporate hospitals have concerned significant proportion of hospitals in developed capitalist countries while in India the process has barely started with the Apollo hospital in Madras.

With this, discussion on proletarianisation of doctors is no longer academic. Doctors seeking employment is not new. What is new is the logic of corporate for-profit hospitals, absolute control by the capitalists, continuous introduction of new technologies, inevitable need to use them at high price to realise investment and earn profit etc. That is profit is no longer incidental or one of the parts of a doctor's medical practice. Medical practice is now incidental to the organisation primarily devoted to profit.

Social and Ethical Issues

The production and sale of irrational and useless drugs with doctor's prescription over-the-counter and even selling prescription drugs directly by the chemists are well-known to us. We do not elaborate on it here as it forms a separate subject for discussion. However, it should be noted that by the time new equipment based medical technology made its entry, the doctors had sufficiently encouraged the technology culture (capsule and injection) amongst people or section of people that matter for it to build further upon.

Since the new technologies are very expensive and in short supply, it has to be rationed. In the market economy, this rationing does not take place according to need but according to the capacity to pay. This is not a new ethical issue. But earlier it did not confront the doctors so blatantly as it does today with new technologies.

The doctor is also confronted with legal problems, more of them where medical insurance has taken roots. Witholding a diagnostic procedure or delaying treatment with certain equipment invite a spate of litigations in many advanced capitalist countries. Doctors pay huge sums as premium to insurance companies to protect themselves from bankruptcy. In the US they have now even agreed to allow their colleagues to review or assess their competence. This has accelerated the production of literature on medical ethics to equip them with enough knowledge of law and pitfalls in practice. In our country this aspect is yet to become major issue.

Despite the high cost and legal issues, the fast use of such technologies is an absolute need for capital. To generate quick demand from the people, more elaborate methods are used than just enlisting doctors, support. So it goes beyond the doctor, directly informing people. This is one of the reasons why in our country import of a nuclear magnetic imaging makes front page news. In this way unnecessary use of such equipment is systematically organised.

As said earlier, technological obsolescence being a major problem, the traditional methods of assessing technology before its introduction are waived. Most of these new technologies are accepted on the basis of description of their excellence, but not tested through careful trials. Neither com-

(Continued on page 35)

Development of Medical Technology

The Example of Neurology

bindu t desai

The brain has remained an enigma through millenia despite the fact that the vast progress in medical technology has helped to visualies it and for its functions to be studied directly and indirectly. This article traces the impact of medical technology on our current understanding of the brain and its role in the developments in neurology. It points out that while some innovations in different branches such as physics, electronics, etc definitely aided the physicians' understanding, often tools which have evolved have ended up being overused. Moreover, even its necessary use has come to be confined to the class which can afford to pay the fancy prices that are charged. Medical technology is thus neither value neutral in its evolution nor in its use.

THE explosion of medical technology in the last century, especially the past 25 years has irreversibly changed the face of medical practice all over the world. This phenomena, greatly accelerated by the advent of the transistor and miniaturised electrical gadgets was rooted in the Cartesian school with the question of mind and soul separated from the body, dealing with the latter as a machine to be understood and treated as a sum of its parts. If its philosophical origins are found in Descartes its ability to discover, probe, explore, remove, and sometimes cure illness is almost wholly due to the enormous advances in human understanding and knowledge about the nature of the electromagnetic spectrum.

Medical technology is no more value neutral than any other technology. It arose in the dynamic expanding world of an aggressive, confident European mercantilism. Today it is still only available at a price and with priorities set by the successors of those merchants. It has benefited from the European Renaissance, the scientific revolutions of the 17th and 18th centuries and the atomic age. This article will review at some length the history of the development of medical technology emphasising its philosophical origins. It will comment on the impact of modern medical technology on diagnosis and treatment, and discuss the advantages as well as problems accruing from its ascendency. I shall use the example of neurology for two reasons; first being a neurologist I felt competent to comment critically on the development and impact of technology on neurologic practice; secondly, the nervous system has presented medical technology with its geatest challenge as this organ system has been virtually inacessible to human manipulation until a few decades ago. Also the correlation between structure and function of the brain is rudimentary compared to other organs like the heart, liver or kidney.

While a review of development of technology in many important aspects of the neurosciences has been attempted some topics like neurophysiology and neuroradiology have been covered extensively, others like neurosurgery rather cursorily. This uneveness, partly due to personal interest in the early history of the discovery and investigation of electricity and its role in neurology, reflects the difficulty of reviewing such a vast topic except at inordinate length.

Development of Neuroscience

The function of the brain, its effect on consciousness and limb movements must have been evident to hunters even in the Paleolithic age. The first recorded description of the brain and its coverings are found in Egyptian papyri written around 500 BC (McHenry 1969, p e). In ancient Greece, Pythagoras (582 BC-500 BC) taught that the brain was concerned with reasoning. His discovery of mathematical principles underlying music and the three sides of a right angled triangle for which he is renowned represent the first examples of the human mind's ability to give theoretical concepts a reality of their own (Bergland, 1986, p 10). A student of Pythagoras, Alcmaeon performed one of the earliest recorded dissections of the human body (sixth century BC) and described the optic nerves. Further progress about knowledge of brain structure and function took a tortuous course. Some of the prominent authorities on brain function like Aristotle (384-322 BC) and later Galen (130-200 AD) seem not to have dissected a human brain (Spillane, 1981). Their ideas of the brain as a cooling organ (Aristotle) or as the transformer of the quintessence of life or pneuma into an animal spirit which in turn was carried through the tubular nerves to the body (Galen) may have arisen because of their ignorance of its structure. Dissecting the human body was frowned on at various points in history in Greece (Spillane, 1981, p 7), in India (Basham 1967), and later by the Catholic Church (Bergland, 1986 p 54). However many observers were aware that the brain was the seat of intelligence, dreams and thought. Hippocrates of Cos (400-370 BC) wrote:

> Men ought to know that from the brain, and from the brain only, arise our pleasures, joys, laughter and jests, as well as sorrows, pains, griefs, and tears. Through it... we... think, see, hear, and distinguish the ugly from the beautiful, the bad from the good, the pleasant from the unpleasant. (Bergland, 1986, p 28).

Erasistratus of Chios (circa 310 to 250 BC) was struck by the greater number of convolutions in the human brain compared to animals. He related this difference of the superior intelligence of humans. But for nearly two centuries the heart was considered the organ of rational thought in Europe and curiously also in India (Basham 1967; Winter 1975). In Europe, Aristotle's views reigned supreme: pneuma from heaven came to the heart via the trachea and lungs. The brain was a cooling gland that regulated the temperature of the pneuma brought to it by the arteries.

In addition to mistaken ideas about brain function, knowledge of brain structure was limited by the peculiar biologic properties of the organ. The brain is extremely soft and friable with its components easily distorted or destroyed unless the organ is frozen or hardened by the addition of a fixative like alcohol or formalin. (EScourolle and Poirier, 1973). Only in the eighteenth century was the technique of fixation of brain tissue by alcohol developed which allowed

adequate dissection of brain tissue (Spillane, 1981, p 18). Thus neuroanatomy illustrates a feature common to all aspects of neuroscience and even science in general: the observation of Thomas Kuhn regarding the dependency of creative thought on technological advancs (Kuhn, 1962). Prior to the fixation of the brain by additives one can only speculate on the reactions of observers to brain tissue "oozing like porridge from the skull in a battlefield or even when delivered promptly with the severed head from an executioner". Covered by membranes, full of convolutions and cavities it must have appeared " a most mysterious object of exploration" (Spillane, 1981, p 18).

Along with countless other branches of knowledge, medical science grew by leaps and bounds with the coming of the Renaissance (1440-1540 AD). Printing allowed technical advances to be disseimated rapidly and effectively. Andreas Vesalius' (1515-1564), *De Humani Corporis Fabrica (The Fabric of the Body)*— the most complete and accurate description of the human body was published in the same year (1543 AD) as Nicolas Copernicus' *De Revolutionibus Orbium Coelestium (on the Revolution of the Celestial Orbs).* Earlier Leonardo da Vinci (1452-1519 AD) had drawn an outline of the ventricles of the brain. He had first inserted a needle in the ventricles, filled them with melted wax and used the casting techniques of bronze sculptors to delineate the shape of the cavities of the brain. Vesalius' anatomical studies led him to question Galenic physiology though he refrained from criticising Galen. Later, in 1629, William Harvey, a student of the School of Medicine at Padua founded by Vesalius, discovered the pump-like function of the heart, described the circulation of blood and helped overthrow Galenic concepts of the pneuma and other mysterious spirits. In the opening year of the seventeenth century Giordano Bruno (1548-1600) was burnt to death for his vision of an infinite universe. When the century ended science had come of age, Galileo (1564-1642) had displaced the earth to its modest position in the solar system, Aristole had been dethroned, his dynamics discarded.

The phenomena of magnetism was described at length by William Gilbert (1544-1603) in *De Magnete* published in 1600. Gilbert was a court physician to Elizabeth I. Magnets, he showed, possessed the virtue of attraction. Force could be exerted by material bodies which were not in contact with one another. Gilbert exemplified the experimenter scientist who Francies Bacon (1561-1626) deemed necessary for the advancement of learning. Speculation was to be replaced by observation, vitalism by mechanisms. Magic lost its hold as an explanation for natural phenomena in the seventeenth century as science unravelled some of these mysteries. It was the era of mercantile capitalism, of the formation of the Bank of Amsterdam in 1609, the Bank of England 85 years later, of the Dutch and British East India Company, of the horrific Middle Passage which for over three centuries carried some 13 million African slaves to the New World. With the development of trade over long sea routes to the Americas, India, China and Indonesia came the imperatives of more accurate navigation charts, skilled shipbuilding, of better implements of war, of a union between merchant and scientist, of education no longer under the aegis of the church but of new colleges which quickly became centres of science. Gresham College, in London, founded in 1579 with monies provided by the will of Thomas Gresham, a financial agent to the Crown and founder of the Royal Exchange, was where the Royal Society first met (Bernal, 1971, p 459). The scientific revolution had begun, everywhere old dogmas crumbled. Descartes' (1596-1650) *Discourse on Method* (1637) discussed a new system which "exhibited that individual arrogance which was one of the great liberating features of the Renaissance, the same arrogance that expressed itself in the great navigators, in the conquistadores, in all the defiances of authority that characterised the end of the feudal period and the beginning of one of individual enterprise" (Bernal, 1971, p 443). "I think therefore I am"—mind became more certain than matter, Aristotle's three souls were dispensed with, only one, the rational soul existed and that too only in the human. It resided in the pineal gland. Descartes' philosophy completed the dualism of mind and matter. Later Cartesians dropped the emphasis on the pineal gland and sought to explain living organisms by the laws of physics. "If all movement of matter were determined by physical laws, mental events must be equally determinate" (Russell, 1945). Even the soul was composed of atoms, thought came from the movement of atoms. Descartes also commented on the conditioned responses that would be described by Ivan Pavlov (1849-1946) over 200 years later. "If you whip a dog five or six times to the sound of a violin he would begin to howl and run away as soon as he heard that music again" (Brazier, 1984, p 24). Descartes recognised the need to explain how the contraction of one muscle must be accompanied by the relaxation of its opponent. His legacy was the mechanically operating model of the human body, a model very influential in medical science even today.

Antoni van Leeuwenhoek (1632-1732 AD) opened the world of small things with his microscope just as Galileo had uncovered some secrets of the stars with the telescope. His study on nerves, hampered by lack of hardening or staining techniques, left him a convinced Galenist—nerves were little canals which carry humor. So the first use of the microscope did not clarify nerve structure. Indeed the issue remained unresolved even a century later (Brazier, 1984, p 37).

Arguments continued about the release of spirits down the nerves, spirits that led to muscle contraction. Outstanding physicians like William Croone (1633-1684) and Thomas Willis (1621-1675) did not "confront the problem defined by Nicolaus Steno (1635-1686); The (muscular) heart continued to beat when taken out of the body, cut off from its nerves and blood supply (and from the soul)" (Brazier, 1984, p 62). Giovanni Borelli (1608-1679) found that when an animal was submerged in water, and its muscles were slit open no bubbles appeared in spite of vigorous muscle contraction by the struggling animal. Therefore he felt, muscle contraction could not be due to gaseous spirits. As the Seventeenth Century drew to a close science had become organised in the manner suggested by Bacon. Powerful scientific societies replaced groups meeting in private homes, scientific journals were started and publishing houses were established that brought out only science related books.

The eighteenth century established science as an indispen-

sable feature of what was to become the Industrial Revolution. Capitalism was transformed from a "phase dominated by merchants and small manufacturers to one dominated by financiers and heavy industry" (Bernal, 1971, p 503). The age of European colonisation was about to begin. The history of America, Africa and Asia would now reflect indelibly the consequences of those ships that had come to their shores over 200 years ago. For Europe would discover from this century onwards the principles governing essential properties of matter like electro-magnetism, it would harness the power of steam and achieve its dominance of other continents aided by the knowledge of these powerful forces in nature. In addition, the seventeenth century had seen the first revolution in Europe; the Civil War and the execution of Charles I of England. These were only the most dramatic manifestations of a world in ferment. In the ideas of the Levellers and the Diggers the seed of a society equal and free from exploitation was eloquently expressed by Gerard Winstanley:

> Freedom is the man that will turn the world upside down, therefore no wonder he hath enemies. . . the earth should be made a common treasury of livelihood to whole mankind, without respect of persons" (Hill, 1975).

These revolutions would recur in America and France in the eighteenth century, the questions raised and problems faced by them continue to confront us today, from general societal issues to the availability, relevance and effectiveness of modern medical technology.

The intellectual advances of the eighteenth century made that period famous as the Age of Enlighenment. Theories about brain function changed and the nervous system could be explained without the existence of a soul. D'Alembert (11717-1783) one of the co-editors of the Encyclopedia shared John Locke's (1632-1704) view of the nervous system; all knowledge was derived from sense experience, hence the sciences should be based on actual perception. The relationship of the brain to the spinal cord was still a puzzle. The function of the nerve roots that were attached to the cords was unkown. Jacques-Benigne Winslow (1669-1760) introduced the concept of a 'sympathetic' system made of 'small brains' or ganglia that were centers for communication between the nerves and various organs. Jiri Prochaska (1749 1820) proposed a purpose for unconsciously initiated movements—preservation of the individual. Such a purpose made the teleological significance previously ascribed to these movements irrelevant.

Discovering Electricity

Many experiments began investigating the new and mysterious phenomena of electricity. Perhaps it was related to nerve conduction. By the early 18th century it was already known that the human body could be charged electrically if it was insulated from the ground. At first it was thought that a layer of air had to be present between the subject and the ground. The characteristics of conductors and non-conductors were only beginning to be understood (Brazier, 1984, p 176). More knowledge about the nature of electricity was necessary before its action on an animal's body could be studied. Also if animal tissue itself produced electricity, the current produced would be very small and need exquisitely sensitive instruments to detect it. These gadgets designed crudely at first by Alessandro Volta (1745-1827) would be modified later by Waller (1887) and Einthoven (1903), (Cooper, 1986), Adrian (1929) and Berger (1929), (Licht, 1971) to herald the use of electrocardiography, (EKG), electromyography (EMG) and electroencephalography (EEG) respectively.

These developments came slowly. Initially a technique for sorting an electric charge had to be discovered. It happened accidentally to Petrus van Musschenbroek (1962-1761) at the University of Leyden. Musschenbroek had been trying to conserve electricity in a conductor and delay the loss of its charge to the air. He thought electricity was a fluid and tried at first to fill an empty glass jar, then one filled with water with this fascinating effluvium. He charged the water with electricity with a wire leading from an electrostatic machine, but to no avail. The electricity dissipated once the electrostatic machine stopped running. One day, his assistant, Andreas Cuneas picked up the jar containing charged water in one hand and at the same time reached out to remove the wire from the electric machine with the other hand. On touching the wire he got an electric shock—his hand had formed one 'plate', the charged water another, and the glass jar the intervening dielectric. A condenser was born (Brazier, 1984, p 180). The Leyden jar as it was called later contained no water, instead it was coated on its inner and outer surface by a tin foil. The jar became a source of entertainment. The Abbe Nollet (1700-1770) used it for a spectacular demonstration of electrical power. He lined up a human chain of 180 soldiers at Versailles for the benefit of the King of France. The entire line of soldiers leapt into the air when the men at each end touched the poles of a Leyden jar. The Abbe repeated this experiment for the Monks of Chartreuse this time using a human chain 3 kilometers long! (Skilling, 1948). The Leyden jar was used by all kinds of 'medical' men to treat a variety of nervous ailments. John Wesley, the Methodist-reformer who wrote a pamphlet on the subject said that he was "firmly persuaded there is no remedy in nature for nervous disorders of every kind, comparable to the proper and consistent use of the electrical machine" (Schiller, 1982, p 4). Electrotherapy persists today in many forms as ECT or electroconvulsive therapy for some psychotic disorders, as trancutaneous and spinal cord stimulation for relief of pain and for relaxing spastic muscle and the EEG is used in biofeedback therapy. The scientific basis of these therapies are unclear, their usage sometimes as in the case of ECT, being based on the erroneous observation that since epilepsy and schizophrenia never occurred in the same patient, convulsions might result in elimination of the symptoms of that psychosis (Solomon and Patch, 1974).

Meanwhile, in the eighteenth century research began on the torpedo fish whose power to shock was known to fishermen and whose ability to cause pain was thought by Ibn Rushid (Averroes) (1126-1198) to be similar to the effect of a lodestone. In 1972 Abbe Lazzaro Spallanzani studied the anatomy of the torpedo in terms of its ability to shock. He was convinced the shock was electrical, a fact which Luigi Galvani (1737-1798) later confirmed. Galvani cut the nerve

supply to one side of the electric organ of the torpedo and found that this side failed to discharge. On svering the head of the fish the discharge was destroyed even though the heart was intact. The mechanism of electrical discharge thus was independent of the circulation. Electric fish aroused sustained scientific interest for here was an animal that produced electricity. But was animal electricity similar to the one physicists studied? Was it triggered by the brain? Michael Faraday (1791-1867) gave an ambivalent answer to the first question, he was not convinced that nervous fluid is only electricity. The second question remained unanswered for a century because there were no instruments to detect the passage of small currents.

Galvani's *Commentary on the Effects of Electricity on Muscular Motion* was published in 1791. Although Galvani was only one of several individuals like Caldini and Fontana who had directly stimulated nerves with electricity, and his discovery came about accidentally like the Leyden Jar, his commentary enabled the science of electricity and physiology to come together and 'each took a great leap forward' (Spillane, 1981, p 147). On 20th September 1786 Galvani had dissected out a nerve-muscle preparation of a frog and placed it on a table on which an electrically charged frictional machine lay at some distance. In Galvani's words "when by chance one of those who were assisting me gently touched the point of a scalpel" to the exposed nerves of the frog "immediately all the muscles of the limbs seemed to be so contracted that they appeared to have fallen into violent tonic convulsions. But another of the assistants, who was on hand when I did electrical experiments, seemed to observe that the same thing occurred whenever a spark was discharged from the conductor of the machine" (Spillane, 1981, p 146). An electrical charge had been transferred to the insulated nerve-muscle preparation by induction from the machine nearby. Galvani then studied 'atmospheric' electricity lightning in a thunderstrom to excite frog legs. The lightning conductor was invented by Benjamin Franklin in 1753. Interestingly Franklin's rebel tendencies had irritated George III who insisted that the lightning conductors at his palace should have round knobs instead of the sharp points Franklin had suggested! (Bernal, 1971, p 602). Galvani attached one end of a frog's leg to an iron wire antenna under the roof of his house and to the other end a wire that led to the water of a nearby well. When lightning flashed in the sky the frog muscles contracted. Later he found that frog muscles contracted when hung on iron gratings by bronze hooks that penetrated the spinal cord, irrespective of atmospheric conditions (O'Leary and Goldring, 1976). Though Galvani was aware that the muscle contraction arose because of contact between dissimilar metals he saw it as proof of animal electricity. In 1975 Volta showed that the frog leg merely served as an electroscope. Volta produced electricity without any animal at all, he simply put two plates of metal one of copper, the other zinc with liquid between them and invented the first electrical battery.

Galvani and Volta differed in their attitudes to Napolean who was then the first consul of France. Napolean conquered the area of Lombardy coverting it into the Cisalpine Republic with himself as its president. Galvani refused to take the oath of allegiance to the Republic and lost his position at the University of Bologna, while Volta supported Napolean and was honored with medals, and a title (Brazier, 1984, p 215; Skilling, 1948, p 44).

The French Revolution resulted in the formation of the Ecole de Medicine and the Ecole Polytechnique which became models for scientific teaching and research. Only the most eminent scientists were employed as salaried professors. The gentlemen amateur and the patronised client scientists of the past were thus replaced. In the Napoleanic period the first counsul turned emperor took a personal interest in science. He saw the utility of science for industry and war.

With the nineteenth century came revolutionary advances in the knowledge of electricity. In 1820 Oersted (1757-1851) accidentially found that electric current deflected a magnetic compass needle at a right angle to the current. Ampere (1775-1836), Gauss (1777-1855) and Ohm (1787-1854) studied the magnetic fields produced by currents. Faraday showed that a magnet moved near an electric conductor produced a current, a discovery of enormous practical significance because electricity could be produced by mechanical action and used to operate machines. The science of electromagnetism was born. It is striking that the Leyden Jar, Galvani's animal electricity and Oersted's observation of magnetic deflection were accidental discoveries. Thomas Kuhn has commented that the difficulty in science is not in making a discovery, but to know one has made it (Kuhn, 1962). This is particularly true when existing theory cannot explain or predict phenomena. The people who are likely to succeed are generally "sufficiently broadminded, and sufficiently critical or ignorant of orthodox theories to make the discovery" (Bernal, 1971, p 608). The belief that electricity is the 'stuff of thought' began with Benjamin Franklin who wondered whether it was the unseen force that extended through our universe. The study of brain electricity was pursued from Galvani onwards. It has helped to understand some aspects of brain function but has been sadly ineffective in solving the problems of brain disease (Bergland, 1986).

The first half of the nineteenth century saw an increase in knowledge about the internal structure of the brain. Johann Reil (1759-1818) studied the lobes of the cerebellum, and by soaking the brain in specific salt solutions was able to separate bundles of nerve fibers that carry specific messages from the body to the brain and vice versa. Luigi Roland (1773-1831) described the cerebral convulutions, Charles Bell (1774-1842) demonstrated that the anterior nerve roots of the spinal cord carried messages that led to movements of muscles, while Francois Magendie (1783-1855) showed that the posterior nerve carried sensation of pain, pressure, heat and cold. The laminated structure of the brain with six layers of nerve cells was recognised by Robert Remak (1815-1865), who besides showing continuity of the axons (nerve fibers) with neurons or nerve cells of the spinal cord, also noted that some nerve fibers were not white (myelinated) but grey (unmyelinated). Camrillo Golgi (1843-1928) developed a silver chromate method of staining neurons which gave the first pictures of the architecture of these cells. Silver salts for reasons yet unknown bind only to the surface of nerves. Theodore Schwann (1810-1882) who describ-

ed the myelin sheath that surrounds most nerve fibers was much influenced by Rudolph Virchow's (1821-1902) cellular basis of disease. Virchow wrote "every animal is a sum of vital units, each of which posseses the full characteristics of life. The character and unity of life cannot be found in one definite point of the higher organisation for example, in the brain of man, but only in the definite, constantly recurring disposition shown individually by each single element" (Bergland, 1986, p 64). Schwann while accepting Virchow's idea that organisms consisted of individual cells which functioned symbiotically argued that brain cells had to know what their neighbours were up to. He conceived of the brain as a gaint spider web with every neuron *directly* connected to every other neuron. His microscopic methods did not allow him to see the synapses (Greek: to clasp) later described by Ramon y Cajal (1852-1934). Cajal, using Golgi's stains, found that every nerve fibre was seperate, ending in tiny bulbs (boutons terminaux) rather like little hands that were *contiguous* with similar bulbs from other axons but lacking any *continuity* between them. But Cajal's discoveries did not lessen the belief in the notion of the brain as a giant-circuit of nerve cells.

More attention was placed on the electricity that flows along the surface of cells than in the activity that went on inside the cell. The synapses became circuit-breakers. Charles Sherrington (1856-1952) who had learnt Virchow's cellular theory in Berlin, continued the work begun by Stephen Hales (1677-1761) 200 years before. Hales had found that the hind legs of a decapitated frog would move if the cut end of the spinal cord was compressed—a type of reflex action. Incidentally Hales made the first direct measurement of arterial blood pressure. Marie Flourens (1794-1867) correctly placed the vital centers of breathing in the medulla, and noted that the cerebral hemispheres received and controlled sensation while the cerebellum co-ordinated body movements. Marshall Hall (1760-1857) showed that reflex action consisted of three parts: a nerve leading from the irritated part to the spinal cord, the cord itself and a nerve going from the cord to the involved body part. Sherrington, known as the father of modern neurophysiology, outlined the sensory nerve supply of the body in terms of the appropriate level of the spinal cord to which the nerve conveyed information about sensibility, and performed several experiments that demonstrated the nature of the tone that is present in normal muscle at rest.

Meanwhile in 1825 C L Nobili's astatic galvanometer increased the sensitivity of measuring electric current by a multiplier effect. Increasing the number of turns made by coil of wire increased the deflection of a magnetic needle when the wire carried electric current. The astatic galvanometer was further refined by William Thompson—later Lord Kelvin—in 1858 into the mirror galvanometer used to receive telegraphic signals. A tiny steel piece, smaller than a sewing needle was suspended by a single fibre. It was a permanent magnet hung at the center of a coil of many turns of wire. When current flowed this tiny magnet swung to one side or another depending on the direction of flow of current. The magnetic force required to turn this needle was very small. A small mirror attached to the needle reflected a beam of light thrown on it onto a screen. The screen had a scale of degrees by which the amount of current in the coil could be measured by the deflection of the spot of light reflected from the mirror. The mirror galvanometer was to be used by Hans Berger in recording the first EEG in 1928. DuBois Reymond (1818-1896) who had built a galvanometer with more than 4000 turns of wire described the resting current seen in excised nerves and muscles and postulated on electromotive force that preexisted in tissues. Edward Hitzig (1828-1907) and David Ferrier (1843-1928) used electrical stimulation to localise the control of body movement by the cerebral cortex. As the recording of electrical potential of the nerves continued Claude Bernard (1813-1878) who demonstrated the paralysing action of the poison curare selectively on motor nerves, spoke of the nervous system as the highest expression of the mileu interior "which inter-connects all the tissues of the organism and makes them react one upon the other" (Spillane, 1981, p 265).

New Tools and Techniques

The latter half of the nineteenth century saw the invention of many tools and techniques now considered essential in medical diagnosis and treatment. Needles and syringes were invented in 1865 (Bergland, 1986, p 39). Herman Helmholtz (1821-1894), who measured the velocity of the nerve impulse, invented the opthalmoscope in 1851. It was now possible to look into the eye, the Shakespearean 'window of the soul'. The swelling of the optic nerves that occurred with brain tumours was observed within a few years, haemorrhage and pallor of the optic discs were also noted. Lister's aseptic surgery and the use of chloroform accelerated the use of surgical techniques; the pocket thermometer was introduced in 1896; Pasteur and Koch established the microbial basis of many diseases and in 1895 Wilhelm Roentgen (1845-1923) discovered the x-ray (De Jong, 1982).

The flowering of clinical neurology also took place during that half-century. In France Guillame Duchenne (1806-1875) who had no formal appointment to any hospitals in Paris, but was allowed to visit outpatient clinics, made major contributions to modern neurology (Dubowitz, 1982). He used electrical methods to study muscle disease, introduced biopsy as a technique in clinical medicine, designed an ingenious needle for muscle biopsy, and described several muscle diseases for the first time including the dystrophy that carries his name. Jean Charcot (1825-1893) founded clinical neurology and psychiatry came into use in the decade of the 1860s when Charcot began his work in earnest. The history of the Saltpêtrière itself serves to highlight the intimate connection between the larger society and the medical world. It was built in 1603 as an arsenal, deriving its name from saltpeter, the principal ingredient of gunpower, that was once manufactured at the site. In 1656 it was converted into a asylum for infirm and abandoned women, in the eighteenth century it housed the 'infirm and insane'. Pinel and Esquirol conducted their psychiatric studies on these hapless victims of France's industrialisation. At the end of the eighteenth century its inmates were described by Coguel as "madwomen seized with fits of violence—chained like dogs at their cell doors and separated from keepers and visitors alike by a long corridor protected by an iron grille; through this grille is pass-

ed their food and the straw on which they sleep; by means of rakes part of the filth that surrounds them is cleaned out" (Foucalt, 1965). In McHenry's laudatory version, "Charcot, who took charge in 1862, saw this motley collection as a veritable mine of neurological material. Containing some five thousand inhabitants of whom three thousand were neurotic paupers and epileptics, the Saltpêtrière offered Charcot a source of case material that was unique in the history of neurology" (McHenry, 1969, p 284). Indeed it did. Charcot described the lesions of multiple sclerosis, motor neuron disease and an inherited nerve disorder now known as Charcot-Marie-Tooth's disease. Charcot is notorious for his role as the charlatan of the Saltpetriere in his preoccupation with hysterical seizures, which according to him occurred exclusively in woman, and which he claimed to cure by compressing their ovaries with his own invention: an ovarian compressor (Veith, 1965, p 232).

In England, Hughlings Jackson (1835-1911), William Gowers (1845-1915) and Charles Brown-Sequard (1817-1894) laid the foundations of clinical neurology at the National Hospital for the Paralysed and epileptic. Jackson is remembered for his seminal work on epilepsy which he defined as "sudden, excessive, temporary discharge" of neurons. He pointed out that lesions of the brain produced a duality of symptoms; loss of function like loss of speech, movement, consciousness and positive symptoms like increased muscle tone, increased reflexes, or uncontrolled motor activity (McHenry, 1969, p 309). Jackson argued for a hierarchical manner of functioning within the nervous system, being heavily influenced by Herbert Spencer's picture of organised societies where primitive lower orders (the spinal cord and nerves and muscles) were kept in their place by the more highly developed upper echelons (the brain). Recent research however reveals that the brain though highly organised does not have a command post at the apex. When Jackson lectured on cerebral function he would draw a pyramid to represent the hierarchy he considered present in the brain. Modern analysis of visual function however shows that neurons of the cerebral cortex operated in parallel not in series. There is no master decision-maker and the brain it seems functions in a democratic and interactive fashion (Ferry, 1986). William Gowers was like Jackson a clinician but differed from the latter's analytical and physiological approach. Gowers was a keen observer of symptoms and signs and described many entities for the first time including myotonic dystrophy, sleep paralysis, and palatal myoclonus.

American neurology began with studies of *Injuries to Nerves and their Consequences* by S Weir Mitchell (1829-1914) who had followed with interest the cases of nerve damage brought forth in such large numbers by the civil war. Mitchell's study of gunshot wounds published in 1864 is but one of a long line of publications and advances in medicine that have occurred through history by the close alignment of the medical profession with the services required of them and rendered by them to the state. As Bernal states "much medical knowledge and pratical treatment was learned in the hard world of the military surgeon" (Bernal, 1971, p 393). From the shaman of yore ordering the rain or sun for the welfare of the tribe to Ambroise Pare (1510-90) unlettered writing in coloquial French about gunshot wounds, Weir Mitchell is but one link in a chain. The United States' Public Health Services' connection with US imperial policy overseas and racism at home is well-documented in Walter Reed's (1851-1902) typhoid and yellow-fever related research following the US occupation of Cuba after the Spanish-American War of 1898 (Bean 1983; Lyons and Petrucelli 1978) and the scandalous study of the natural history of syphilis exclusively in black men, a study that ended only in 1970. (Jones, 1981).

Developments in Physics

As the twentieth century dawned, James Maxwell's (1831-79) electromagnetic theory established a unity between light, electricity and magnetism. Electromagnetic oscillations gave rise to waves in a hypothetical ether, similar to those of light but with much lower frequencies. In 1881 michelson and Morley proved the non-existence of ether. Soon light itself was explained as a low-energy photon or a packet of energy virtually massless moving at an incredible but definite speed. Thomas Edison's (1847-1931) discovery in 1884 of the Edison effect that a glowing filament of an electric bulb could retain a positive but not a negative charge, i e, current would flow only one way from a heated metal plate to a filament, led to the invention of the electronic valve. Electricity could travel without any wires through empty space. In 1905 Lee de Forest (1873-1961) mounted a piece of a zig zag wire between the filament and plate. This electric screen when negatively charged would repel electrons which could not get past this grid. However when the grid was positive or neutral electrons could flow on through to the metal plate. A very small current could change the voltage of the grid—a weak current could control a relatively strong current. The triode was born and with it the revoluntionary possibilities of amplification and of power based on information. Radio and television, high-tension vacuum and valve techniques that followed integrated physics and electricity into the new applied science of electronics.

Cathode ray oscilloscopes provided electronic amplification of very weak signals even very tiny such as occurred between synapses. The Cathode ray tube in which a beam of electrons flashed across a tube on a horizontal axis could be used for on-line recording of a signal on a vertical axis. The string galvanometer, used by Richard Caton (1842-1926) in 1875 to directly record currents from the surface of the brain and 60 years later by Hans Berger, was replaced. It is noteworthy that Berger's publications were initially dismissed as artefacts and his records though carefully assembled were met with "monumental indifference, disbelief or even hostility" (Gloor 1971). Berger's work was ignored for several reasons. Neurophysiologists held a deeply felt belief in the brain as a highly complex neural network. Surely brain activity could not be the simple, regular waves Berger demonstrated. Also, Berger's reticent personality, and his refusal to cooperate in building Hilter's New Order unlike the bulk of the German medical establishment, (Light, 1985) forced him into retirement in 1938 and suicide three years later. Equipment to record EEG was further improved in the United States. Using a recorder developed by Western Union

for writing on a ticker tape with an ink stylus, replacing its magnets with more powerful ones of nickel, aluminium and cobalt alloy and by providing stiffer springs, it was possible to electrically record the human brain's normal background rhythm called alpha waves with frequencies of 8-13 per second at a paper speed of 3/8th of an inch per second. Brain waves would now be recorded easily; the action potentials of individual muscle fibres, and the velocity of nerve impulse could also be studied by using amplifiers and cathrode ray oscillographs.

These advances in neurophysiology made possible by the improved radio and amplifying equipment, oscilloscopes and computers forged in "the furnace of human conflict" during the two world wars, (Walter 1971) were instruments designed for destruction transformed in neurology for more benign purposes. EEG has contributed to knowledge about epilepsy, sleep disorders, brain tumors and altered states of consciousness. But the test has not been anywhere as helpful as the volume of words written about it, well over ten million in the *Journal of Electrophysiology and Clinical Neurophysiology* alone, would suggest (Williams, 1974). Used indiscriminately to bolster physicians incomes, the EEG and EMG have been aptly described as wasteful, and pretentious (Menken and Sheps, 1984); or that as "most single records would best be reported thus: this record departs slightly from accepted standards of normality; nobody knows what this means" (Matthews, 1973). Similar caution has been expressed about the overuse of evoked potential techniques (Eisen and Cracco, 1983). This technique uses computers to store many elicited responses, averaging them and enabling one to record signals as small as one-hundredth of background activity. The electrical route of studying brain function which began in the eighteenth century has done very little for patient care (Bergland, 1986, p 76). Structural abnormalities of the brain are more easily and accurately uncovered by radiological techniques to the development of which we now turn.

As far back as 1838 Faraday had observed a luminous glow which (William Crookes (1833-1919) in 1876 called cathode rays, as they seemed to consist of particles torn out of the cathode or negative end of a highly evacuated glass tube. Nine years later Wilhelm Roentgen noticed something happening *outside* such a tube. It could fog photographic plates, pass through sheets of rubber, through human skin and flesh, but not through bone. Roentgen had discovered x-rays—a scientific discovery with a vengeance (Bernal, 1971, p 73). It unlocked doors in medical diagnosis, and many branches of physics. X-rays are photons with an energy level greater than 100 electronvolts (eV). (For comparison visible light photons have energies of 2 to 3eV). X-ray machines spread rapidly in Europe and the US as the high voltage generators and evacuated bottles necessary to produce x-rays were already available in many laboratories. It soon became clear that x-rays were useful only in differentiating gas from soft tissues and bone. They could not reveal useful structural details in most soft organs like the brain.

The brain posed special problems to clinical medicine. Generally physicians like to visualise the structures they deal with. In addition to vision, physicians till the nineteenth century would palpate, and percuss the part of the body considered involved in disease. However the brain is inaccessible, being surrounded by the rigid bony skull, to the senses of sight, hearing, smell, or feeling, and it is very fragile. Palpating the brain, where there is no skull, would irreversibly destroy brain tissue! Thus the skull which protects the brain from mechanical insults also prevents it from being reached by the physician. Table 1 indicates the presently available means of imaging the brain. Even a quick glance at this table reveals the intimate connection between neuroimaging techniques and usage of some part of the electro-magnetic spectrum (See Table 2). Neuroimaging has advanced because of contributions from many fields of science: neorology, neurosurgery, clinical radiology, radiation and nuclear physics, engineering, mathematics, computer science, mechanical engineering and biochemistry to name a few.

Progress in neuroimaging though rapid was often acciden-

Table 1: Neurological Imaging Techniques*

Procedure	Image of brain that results
Neurological consultation	Imaginary construct of possible pathology
Electroencephalogram	Surface electrical activity below 80 Hz
Skull films	Distribution of crystallized calcium in head
Ultrasound midline	Position of 3rd ventricle
Isotope scan	Distribution of blood-brain barrier
Pneumoencephalogram	Location of cerebrospinal fluid compartment
Cerebral agiogram	Location of blood compartment
Computerized tomogram	Distribution of tissue radiodensity
Positron tomogram	Distribution of brain metabolism and blood flow
Nuclear magnetic resonance imaging	Distribution of brain water

(from Oldendorf, 1980)

Note * All of the special neurodiagnostic procedures mentioned can be considered ways of imaging the brain. Each produces images of the brain in a unique way, isolating some more or less restricted characteristic of the brain and constructing an image from it, thereby providing a restricted conceptualisation of the structure and function of the brain.

Table 2: The Electro-Magnetic Spectrum and Neuroimaging

	Wavelength (centimeters)	Photon Energy (electron volts)	Frequency (Hertz)	Neuroimaging Technique
Radio (upto VHF)	$10\text{-}10^{5}$	0.00001	$10^{3}\text{-}10^{8}$	MRI, Ultrasound
Microwave	0.01 + 10	0.00001 to 0.1	$10^{10}\text{-}10^{20}$	
Infra red	0.0001 to 0.01	0.1 to 1	$10^{13}\text{-}10^{14}$	
Visible	2×10^{-5} to 10^{-4}	1 to 6	$10^{14}\text{-}10^{15}$	
Untra violet	10^{-7} to 2×10^{-5}	6 to 1000	$10^{16}\text{-}10^{17}$	
Xray	10^{-9} to 10^{-7}	1,000 to 100,000	$10^{18}\text{-}10^{20}$	Skull xrays Computerised tomography
Gammarav	10^{-9}	100,000	$10^{21}\text{-}10^{22}$	Radioactive Isotope

(modified from Oldendorf 1980; Weinberg 1977; Young 1984)

tal. In 1912, an x-ray taken of a man with a skull fracture showed air in the cavities or ventricles of the brain. Six years later, Walter Dandy (1886-1946) "made the quantum intellectual jump from the clinical observation of air in the head resulting from head trauma... to its deliberate injection for diagnostic purposes" (Oldendorf, 1980, p 15). The pneumoencephalograph or PEG, used for over 50 years did not show the brain directly. Air injected between the middle (arachnoid) and inner (pia) layers of the coverings of the brain filled the ventricles of the brain and by comparing differences with a normal outline one could infer something about the size and shape of surrounding structures.

A Parisian neurologist Jean Sicard (1872-1929) had been using Lipiodol, an iodized oil for treating back pain. He injected the substance into the lumbar muscles and found that it was well tolerated and produced no serious side effects. He had noticed that Lipiodol was excellent x-ray material and used it to outline the bronchial tree in the lungs. One day one of his pupils injected Lipiodol into the lumbar muscles and was horrified when he found he was withdrawing cerebrospinal fluid (CSF) as he drew back the plunger of the syringe. He rushed off to Sicard, who asked how the patient was and on being told the patient was well, decided to look at the lumbar region on a flourescent screen. Sicard first screened the patient standing up and saw that the Lipiodol had dropped to the bottom of the cavity surrounding the spinal cord (the spinal subarachnoid space). He then had the brilliant idea of tilting the patient head down and seeing the movement of Lipiodol (Bull, 1982). The technique of myelography was born, one which has proven very useful in diagnosing diseases of the spinal cord-like tumors and protruded intervertebral discs. In 1926 Egaz Moniz (1874-1955) performed the first cerebral angiogram in a living patient. A substance opaque to x-rays was injected in the carotid arteries that supply blood to most of the brain. This technique, still in use today, delineates tumors, hemorrhages, blood clots and vascular malformation of the brain. Research now concentrated on the development of a non-toxic contrast-agent. These agents had to confront the blood-brain barrier (BBB) which depends upon certain characteristics of the capillaries in the brain. A capillary, a tube with a diameter of 0.1 mm, length of about 1 mm has a wall of single flat endothelial cells that are about 0.001 mm thick. Blood and soluble substances in the plasma can pass through the walls of non-neural capillaries or diffuse through the intercellular clefts, or pores between two endothelial cells. Molecules up to 40,000 molecular weight can pass through these pores. Pinocytosis is another way of bloodcell exchange. Here the inner walls of the endothelial cell breaks, a small amount of blood enters the cytoplasm and is transported through the width of the cell and dumped into the extracellular space immediately surrounding the capillary. In neural capillaries, on the other hand, there is no intercellular cleft, the endothelial cells form 'tight junctions', and pinocytosis is virtually absent. Thus the blood and brain can exchange material only through the capillary cell. The tight junctions exclude molecules with molecular weights as low as 2000. Water-soluble polar compounds, i.e. those substances which have an electric charge at each end of the molecule, are mostly excluded while lipid-soluble compounds rapidly and easily enter the brain. Paul Ehrlich (1854-1915) had discovered the BBB in 1885 when he noted that aniline dyes injected into an animal stained its body but not the brain or spinal cord. The BBB is 'lost' when the brain suffers any kind of insult like infection, trauma, or a stroke.

The contrast-agents that became widely used were iodinated organic compounds because they were the least toxic, stable in water-solution, with a high molecular weight, but low osmolarity, (1.5 osmolar solution only five times the 0.3 osmoles of brain capilary endothelial cells). Also the iodine atom's innermost shell of electrons (the k-shell) has a binding energy of 33 Kev. Incoming x-rays in computerised tomography have an energy level of 60 to 80 KeV. These rays can be captured by the k-shell electrons of iodine, deleting the x-rays and increasing the radiodensity of the tissue that contains it.

The second world war which sparked the development of nuclear physics resulted in many artificial radioactive substances being avaialble by the mid-40s. In 1947 George Moore then an intern in surgery discovered that radioactive iodine injected intravenously emitted gamma rays which could be detected by a Geiger counter. Radioactive isotope imaging was refined in the next two decades using a thallium-activated sodium iodide crystal photo multipliers. The small amount of thallium breaks up the regularity of the sodium iodide crystals so that they scintillate or generate visible light photons when struck by gamma rays. These photons are amplified by the photomultiplier and the amplitude of the voltage thus produced measured electronically. Radioisotope scanning did not produce sharp images of the brain as attempts to sharpen the image by collimation resulted in many emitted rays being uncounted. Also Compton scatter or deflection of gamma rays by atoms in their path made the rays appear to have a different origin when they reached the detector, these 'incorrect' locations further contributing to a fuzzy image.

Visualising the Brain

By 1971, though the brain could be visualised indirectly by angiography, ultrasound, radioisotope scanning, PEG etc, these tests were either cumbersome, time consuming or very uncomfortable to the patient. W H Oldendorf around 1960 and G N Hounsfield in 1967 independently developed the technique of computerised axial tomography (tomos=a slice) based on tissue specific gravity. The fascinating story of the development of computerised tomography is recounted in Oldendorf's book *The Quest for an Image of Brain*. In 1960, Oldendorf applied for a patent for a device that produced a radiographic cross-section of the distribution of tissue structures based on regional radiodensity. A narrow collimated beam of high energy photons passed through the head and were counted after they emerged from the head by means of a detector fixed in relation to the photon source. Several points on a particular plane of the head were scanned using rotational and translational motions. The observed counts of photons were then processed by a computer which reconstructed the distribution of radiodensities within

the plane. Oldendorf was granted a patent in 1963 but found none of the major x-ray manufacturers interested in the device. As he ruefully remarks "their lack of interest was a matter not so much of technical unfeasibility (since they had more information than I had as to whether the idea was workable), but more of economic promise. A letter from one of the world's major x-ray manufacturer ended—even if it could be made to work as you suggest, we cannot imagine a significant market for such an expensive apparatus which would do nothing but make a radiographic cross-section of a head" "Oldendorf, 1980, p 85-6). Success came to Gordon Hounsfield who worked in the research laboratories of EMI Ltd. Hounsfield decided to use sodium iodide crystals rather than the photographic plates used for 50 years in radiology, because the crystals being 100 times more sensitive than the plates, allowed better differentiation of soft tissue density. As his device took five minutes to produce a picture he was advised to study the brain which did not move rather than the chest or abdomen as images produced of these regions would be blurred since no patient could hold his breath for five minutes. Today a picture can be produced in seconds allowing any part of the body to be scanned.

EMI pursued the development of the CT scanner as Oldendorf explains, being previously uninvolved in medically-oriented research they were not aware that the limits of technology had already been explored. The production of the CT Scanner illustrates a feature common to technological and scientific advancement under capitalism. The large x-ray manufacturers behaved in a manner similar to wireless manufacturers: too intent on immediate profits to indulge in expensive development (Bernal 1971, p 717) whereas the unorthodox approach of the inexperienced musical company led it to market one of the truly revolutionary diagnostic techniques in medicine. Two other brain imaging techniques have become available since 1971. They are positron emission tomography (PET) which measures regional metabolism of glucose or oxygen and magnetic resonance imaging (MRI) in which the magnetic property of hydrogen atoms is utilised. The hydrogen atoms of the brain are made to resonate in a strong magnetic field. They partially align themselves with the field and absorb energy which is subsequently reradiated. Images of hydrogen density and relaxation time allow striking pictures of the brain and spinal cord making virtually all parts of the central nervous system accessible to the human eye without tissue ionisation, injection of contrast material or radioactive substances being involved (Oldendorf, 1984).

C T and MRI scans have proliferated in the US, the number of C T scanners rising from none in 1973 to 800 in 1978 representing a capital investment of 400 million dollars (Oldendorf, 1980), while MRI scanners rose from none in 1978 to about 200 in 1985 leading the industry's two dozen firms collectively looking to annual sales worth 2500 million dollars worldwide in 1988 (*Lancet* 2:1169, 1984). Separate buildings, each costing as much as 1.5 millions dollars, have been constructed to 'contain' the magnetism surrounding the MRI equipment financed by 'venture-capital' groups who see them as tax shelters or investment opportunities (Goldsmith, 1984).

So the high-tech revolution in medical diagnostics is expensive, becomes obsolete rapidly and by virtue of the financial stakes involved, available at a stiff price therefore largely only to the affluent (see Table 3). Though the technology provides diagnosis more accurately at a crucial early stage of some diseases, and the greater precision of pinpointing lesions leads to a reduction in other tests (see Table 4) it is cost-effective in a rather narrow sense: to those able to get the test done. The issues of cost-effectiveness deserves a full discussion on its own. Suffice to say here that in the US corporatisation of health care promotes the use of capital intensive technology while ignoring the question of access to these services by the 35 million Americans who are either under and uninsured.

Improvements in neurodiagnosis aided the growth of neurosurgery. Injury to the head had been regarded as a surgical problem since antiquity (Flamm, 1982), but removal of tumors of the brain and spinal cord was first attempted only about a century ago. Victor Horsley (1857-1915) a pioneer who contributed to many neurosurgical techniques

Table 3: Costs of Various Neurodiagnostic Procedures in Relation to Discomfort to Patient, and Information Obtained

Procedure	Discomfort form Procedures	Information Obtained	Cost (US Dollars)
Neurologic Consultation	—	+++++	80-100
Skull xrays	—	+	55- 75
EEG	—	++	75-150
Ultra-sound (midline ECHO)	—	+	25- 50
Pneumoencephalogram	++	++	300-500*
Caroted angiogram	++	+++	550-1200*
Digital Subtraction Angiography	+	++	300-400
Radioisotope Scan	–	+++	150-250
C T scan (head)	–	++++	300-500
C T scan (spine)	–	++++	325-600
MRI scan (head)	–	++++	600-800
MRI scan (spine)	–	++++	600-800

Note: * If costs of hospitalisation are included these procedures would me much more expensive—daily room charges vary from $ 175-250 1 day.

(modified from Oldendorf 1980; Gunby 1983)

Table 4: Effect of Various Procedures AT Dent Neurological Institute, Buffalo, N Y

Procedure	1973 (pre-CT)	1976 (post-CT)
Echoencephalograms	189	0
Pneumoencephalogram	39	5
Isotope brain scan	579	157 (16)*
Lumbar punctures	425	167
EEGs	1,047	731
Angiograms	111	87
Hospital admissions	355	351
Patients seen in ER	222	291
Office consultations	668	1,087

Note: * Sixteen tests were required by neurosurgeons and neurologists. The numbers below the line indicate that, despite the reduction of tests, the total clinic work load increased between 1973 and 1976.

(from Oldendorf 1980)

including decompressive surgery for brain tumors, laminectomy for removal of spinal cord tumors, nerve section for relief of exquisite facial pain (tic doloureux), etc deserves mention for his championing of social causes. He was an aovwed agnostic who worked for Votes for Women (the Suffragette Movement) demanded equality for women in medicine, sought proper recognition for the nursing profession and urged health legislation that would benefit the poor (Cooper, 1982). He was disliked by the British medical establishment who feared his socialism (Taylor, 1986). A remark of William Osler's illustrates the attitude of the medical establishment then (and I suspect it would not be very different today) to Horsley's politics: "What demon drove a man of this type into the muddy pool of politics?" (Osler, 1916). Horsley though appointed to the staff of the National Hospital in 1886 was given no beds of his own in the thirty years he worked there.

Neurosurgery progressed rapidly in the twentieth century keeping pace with developments in neuroradiology. Harvey Cushing (1864-1939), a leader in modern neurosurgery, investigated the role of the pituitary gland and established that it secreted growth hormone. He linked the brain with endocrine function, a link that appears increasingly important as the number of neuropeptides discovered grows, their actions playing a pivotal role in memory, emotions, sleep, and the perception of pain. Indeed Bergland (1986) argues that we have come full circle. The brain may be what the Greeks imagined it to be: a hormonally modulated gland with the "stuff of thought" being large molecules or peptides and not electricity. The discovery of neuropeptides would have been difficult without a simple and safe technique to examine cerebrospinal fluid (CSF). Such a technique was invented by Heinrich Quincke (1841-1922) who was searching for a way to remove CSF from children with hydrocephalus. He inserted a needle with a stylet in the lumbar intervertebral place and removed CSF. He used the lumbar puncture to examine the constituents of CSF and described the changes in the latter in purulent meningitis (McHenry 1969, p 366).

The role of special chemicals or neurotransmitters that conveyed messages across a synapse was first described by Henry Dale in the 1930's. Acetyl choline, released by the vagus nerve which supplies the heart, slowed the rhythm of the heart. Soon other neurotransmitters were discovered and by 1975 it was known that the brain produced morphine like substances or endorphans. Presently over 45 neuropeptides are known and their effects on degenerative diseases of the brain like senile dementia and Parkinson's disease under active study. Tools used in peptide research include radioimmunossay, immunocytochemistry and complementary DNA probes. Usage of monoclonal antibodies, introduced in the last decade, has made possible knowledge about the internal structure of the neuron. Disciplines that were unknown till the early seventies flourish in their own right today. Neuroimmunology, molecular genetics and neuropeptide research bring together branches of science outside the field of clinical medicine. Advances in knowledge are depandant upon a sophisticated and wide technological base. Often new techniques are developed for reasons other than what they are used for later. For instance monoclonal antibodies developed out of Milstein and Kohler's attempts to learn more about the genetic control of synthesis of antibodies (Sattaur, et al, 1984). Presently brain function is accepted as both hormonal and electric, without a brain-body dualism. Both are dependant on and influenced by the other. A basic operation or function common to all areas is suspected but the manner in which integration of thought and behaviour occurs is unknown. Neither are we able to correlate structure and function at the level of a single cell (Philips et al, 1984).

Conclusion

The brain then remains the enigma it has been through millenia. It can however be visualised, directly and indirectly, its functions studied and modified by chemical, electrical, and surgical means. Progress in medical technology and knowledge about basic biologic structure and function, which permit these interventions in the nervous system, records even more spectacular advances in other organs—the heart, the liver, the kidney and bone marrow can be transplanted. Machines can do the job of the heart, the lungs and the kidney. No part of the gastrointestinal tract remains hidden from the human eye with the use of fibre-optics. Setting broken bones, stitching up torn arteries, controlling bacterial, fungal and parasitic infection, these are but some of the techniques taken for granted by a majority of the citizens of Europe and North America. But the availability and relevance of this technology to a large section of humanity remains tied in to the social, philosophical and economic realities which govern our planet. Flowering first in Europe, and later North America, medical technology has concentrated on a cellular and clockwork like approach to the body. Preventive measures have generally received scant attention particularly those that focus on industrial pollutants as likely carcinogens or of individual habits like smoking that are promoted by big corporations. Prevention by innoculation against disease no longer has universal applicability.

Recently developed hepatitis and malaria vaccines are enormously expensive and intended only to aid soldiers of the "free world" as they are called to save democracy in tropical and equatorial climes. The electronic razzmatazz available at the beck and call of physicians follows the road of most commodities—the more, the better! Marketed expertly by companies out to make quick and big profits much of the application of medical technology is prohibitively priced and even unnecessary (Angell, 1985). Certainly it is difficult to account for the number of intensive care units, CT scanners, coronary artery bypass grafts in the United States without considering the links between medicine and the health care industry.

A society that cares neither for adequate prenatal care, nutriton, education, housing, and old-age security exhibits sudden concern for end-stage renal disease and elderly patients when government programmes assure physician, hospitals and biotech industries of sustained high income. A modern intensive care unit reflects uncannily the society from which it has emerged. Notwithstanding the underlying disease, modern death bed rituals are mounted. Every index of body function is tracked and treated without any

attempt at considering the patient's prognosis or the futility of these costly heroic efforts. Blood gases, body pH, electrolytes, urine output, continuous electrocardiographic monitoring and arterial blood pressure recording, respirators, nothing is ignored in this relentless pursuit of information.

Macabre though it may sound, patients die, but not before they are made biochemicaly and haematologically normal! The same system of hospital based technological intensive medicine is sought worldwide, an acknowledgement in part of its limited, but definite success in combating disease and relieving suffering. The control of infection proudly acclaimed as an achievement of medicine probably has more to do with better nutrition, sanitation and hygiene (McKeown, 1976). The efficacy of antibiotics has depended on the integrity of the body's defence mechanisms against disease. They are ineffective in infections such as the AIDS virus, which derives its lethal nature from its ability to destroy the immune system of the body. The AIDS epidemic illustrates the complex multifaceted nature of modern medicine. Though the medical establishment is baffled by the disease and presently unable to help its victims adequately, a remarkable amount of knowledge has been acquired in the five years since the disease became known. The medical profession not particularly noted for its compassion towards those society rejects or ignores, has been free of panic and prejudice while AIDS high risk groups consisted largely of drug addicts and male homosexuals. In fact, it has campaigned against hysterical and unwarranted measures such as quarantine very effectively. Medical technology helped uncover the human immunogenic virus as the cause of AIDS and may give us a vaccine in the next decade. Yet AIDS illustrates the limitations of modern medicine. It concentrates on treating disease not in learning more about why only a few acquire it. In any epidemic the disease affects a much larger proportion of the populace than is either incapacitated or killed by it. Factors that protect most individuals are only now beginning to be studied.

Finally and very importantly comes the question of resource allocation. It would cost a fraction (about 30 billion dollars) of the amount spent on arms (800 billion dollars a year) to feed, clothe and educate every person on earth. CT scanners and MRI equipment co-exist within a stone's throw of people scouring through garbage cans for food. Drugs that can save human lives are controlled by corporations notorious for overcharging poor countries. As Martin Ryle put it in a letter written several months befor his death in 1984: "The benefits of medical research are real, but so are the potential horrors of genetic engineering and embryo manipulation. We devise heart transplants, but do little for the 15 million who die annually of malnutrition and related diseases. Our cleverness has grown prodigiously—but not our widsom" (Ryle, 1985).

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Politics of Contraceptive Technology
Depo-Provera in New Zealand

sally washington

The development and dissemination of injectable contraceptives provides a good illustration of the politics of contraceptive research and its international dimensions. It is also an example of the capitalist patriarchal control over women's fertility. The article throws light on the $ six million clinical trial which was conducted in New Zealand by Upjohn, the sole manufacturer of the contraceptive. Needless to say a majority of women on whom the drug was tried were black and working class as well as Maori women. The New Zealand trial was extremely important to the manufacturers for several reasons and moreover there were several conditions in the country which made it convenient for Upjohn. Not surprisingly women's struggles against these trials have been determinedly put down.

IN the patriarchal mode of reproduction, women lose their social power at the moment of conception when the work of reproduction begins. There is no right time to become pregnant because in this mode, sex, procreation and the socially necessary work of parenting are inextricably linked and all occur under male control. (Trainer, 1986). In theory however, contraception allows individual women to plan when they will confront this process. Female control of fertility is therefore an essential condition of women's self determination and is an important site for gender struggles.

Women do not make real choices about when or whether to reproduce. It is a misnomer to talk about 'free choices' when the means of contraception (the pill, injectables, intra uterine devices [IUDs] etc) are not primarily developed according to women's needs, but are determined by the forces of the capitalist patriarchy mediated by the state, the medical establishment and the multinational drug corporations.

In this article I examine the patriarchal means of contraception to discover the real relations behind their development and dissemination. I shall use the example of the injectable contraceptive Depo-Provera as one of the most horrific examples of the capitalist patriarchal control of women's fertility, and one that has special relevance for New Zealand women. I shall also attempt to link this discussion to the current struggle by Indian women to have a similar (progestogen based injectable) contraceptive, Net-Oen, banned in their country.

A Patriarchal Industry

Men dominate the contraceptive industry at every level; in research and development, as manufacturers and suppliers, and as regulatory authorities. Male dominance means that the contraceptive cafeteria reflects patriarchal needs to control female fertility. Common features of 'modern' contraceptives, are that they control female rather male fertility. The form that their administration takes, is that birth control is a female responsibility. Virtually no research has gone into male contraception. The repertoire is currently limited to condoms and sterilisation, as patriarchy could not tolerate tampering too much with male fertility.

Birth control is also a commodity. The forces of patriarchy determine that contraceptives should be aimed at female fertility, but the detailed decision about which contraceptives will be developed are determined by the forces of capitalism. The bulk of research money pours into IUDs, the pill and methods of 'reversible' sterilisation including injectables, while barrier methods receive minimal investigation. Barrier methods have limited profitability whereas chemical methods are "amongst the most profitable of all pharmaceuticals" (Bunkle, 1983).

Chemical methods are presented as more 'effective' but the real reason why they are given such priority is because they are administered by medical professionals, not controlled by the women who use them. Chemical methods are typically dangerous so women must be kept ignorant of their functioning.

The patriarchal monopoly of contraceptives and contraceptive information means that women must either 'accept' whatever is developed and offered by patriarchy and risk dangerous side effects, or 'fall' pregnant and face a possible lifetime of domestic drudgery. The social conditions of our lives and the wider political system in which we live influence the extent of risk we will take as well as the awareness of that risk. In countries like India, a women's ability not to become pregnant often means better access to housing, schooling for their children and health services: all typical family planning incentives, (Balasubrahamanyam 1986).

While modern contraceptives appear to give women some choice about when they reproduce, the real structures at work are patriarchal and hence, do not serve women's needs. Capitalist corporations require that contraceptives maintain profitability, imperialist nations require effective population control weapons and the medical profession demands that contraceptives are monopolised so that only medical 'experts' can administer them. Under these criteria, Depo-Provera and its injectable cohorts are ideal contraceptives.

Depo-Provera in New Zealand

Depo-Provera works by inhibiting ovulation and is administered by injection once every three months. It is however, a temporarily irreversible drug which cannot be purged from the bloodstream once injected. Those women then, who suffer severe side effects from it must endure these for at least three months. Millions of women are using Depo-Provera worldwide which given its dubious safety record, amounts to a massive experiment on women, (Bunkle, 1985). Since the patent on DMPA, the progestogen used in Depo, expired in 1984, other brands of injectable contraceptives have flourished. One of these is Net-Oen. Given that the active agent in progestogen-based injectables is similar if not identical to Depro-Provera, it could logically be argued that the side-effects will also be similar. Certainly the means by which multinational corporations have 'tested' and disseminated their particular brands have been surprisingly similar.

America's Upjohn Corporation took over the development of Depo in the 1960s. The drug had been used in the 1950s

but had been cast aside because it caused disease of the uterus (Unity, 1982). In 1965 Upjohn researches began human experiments on Thai women using three monthly doses of Depo which were later increased to six monthly doses.

In 1969 Upjohn applied to the American Food and Drug Administration (FDA) for a licence to sell the drug as a human contraceptive. A year later, the seven year study on beagle dogs and the eleven year monkey study required by the FDA began. In New Zealand the Health Department approved Depo Provera for use as a contraceptive before the results of both studies were released. The results revealed increases in both benign breast nodules and breast cancer. Meanwhile, other unsuspecting women were participating in trials of Depo in Bangladesh as were black women in South Africa and what was then Rhodesia.

In 1974 the FDA allowed the 'restricted' sale of Depo for 'patients' who knew the drug could make them sterile; who were unreliable users of contraceptives; who could not use other forms of contraception; or who had a history of contraceptive failure. In 1978, after three Congressional Hearings the FDA rejected Upjohns's application to market the drug in the USA.

A year later, the rhesus monkey study revealed that two out of the twenty high dose animals had cancer of the uterus and three had breast lumps. But Upjohn's enthusiasm was not dampened by these results.

Many developed countries including Australia, Britain (temporarily) and the USA have banned Depo pending proof of its safety. Evidence is still being gathered from millions of female 'guinea pigs' who still use it: essentially the poor in Jamaica, Thailand, Mexico, Sri Lanka and New Zealand. In countries where it is banned for general use disadvantaged sections of the population are also using it, in particular: West Indian and Asian women in Britain, aboriginal women in Australia and Chicano and Black women in America. Similar trials of other injectables with less of an international reputation then Depo are also being conducted, such as the Net-Oen trials in India.

The carcinogenity of Depo has been the main issue in the debate over its safety. Other side effects are relegated to 'minor' or 'irrelevant' status, which women are expected to put up with. What are the effects of Depo use?

i) Long-term risks include:

a) anemia
b) diabetes
c) temporary or permanent infertility
d) uterine disease and permanent damage to the ovaries, pancreas, liver and adrenals
e) lowered resistance to infection because of its negative effects on the production and distribution of antibodies: particularly damaging to poor women.
f) child abnormalities: Depo is especially recommended for breast feeding mothers on the assurance that there are no negative effects on the production of breast milk. Yet Depo has been found in breast milk, and discovered in the fact tissues of breast fed children of Depo mothers. The drug also cannot be discontinued if a women finds she is pregnant which means it could act on the fetus for several months.
g) cervical, endometrial and breat cancer: Depo users have revealed three to nine fold increases above normal rates of cervical cancer (Neal, 1979).
h) A New Zealand study found that several women had serious anaphylactic reactions which were almost fatal (Bunkle, 1983).

ii) Immediate and short-term effects include:

a) abdominal discomfort
b) dramatic weight gain or loss
c) depression: progestogen is a well-known depressive drug.
d) loss or suppression of sexual desire and/or orgasm: Depo is used in two American clinics to chemically castrate rapists. Supressing libido is an ironic property for a contraceptive.
e) headaches, dizziness and nausea.
f) vaginal discharge
g) breast discomfort and abnormal growth
h) menstrual abnormalities are suffered to some extent by all women on Depo.

One respondent to a New Zealand survey was bled every day for three years and eventually had a hyserectomy, while about one Depo user a week is admitted to Auckland's National Women's hospital with uncontrollable bleeding. Yet Upjohn medical director, Norman McLeod, dismisses this by saying "Anyway, bleeding is more of a nuisance than a health problem and can be easily dealt with" (*The Press*, 1985) apparently by administration of controversial estrogen pills probably also produced by Upjohn.

Depro-Provera was not primarily designed to help women control the reproductive lives, so why do millions of women still use it? Probably the main reason why women still use drugs like Dempo, despite their dubious safety records, is that they are not aware of the risks or the alternatives. We assume that whatever medical professionals and 'specialists' prescribe has been adequately tested and proved safe. This assumption could be fatal.

Scientifc Evidence

The FDA ban on Depo effectively closed the US market to Upjohn and worse still meant the US 'aid' agencies could not supply it overseas. Upjohn has campaigned hard to have this situation reversed. The most effective strategy in this campaign has been to produce 'scientific evidence' that the drug is safe. It has spent millions a year ($ 6 million on a New Zealand study alone) on research designed to produce the desired results. Investigations into the safety of Depo have therefore centred on its carcinogenity (which is difficult to prove anyway) while its more immediate side effects have been ignored.

Upjohn's control of the information about Depo allows it to brush asise any evidence that questions its safety. In the first seven-year beagle study for example, Upjohn dismissed the findings that 18 of the 20 dogs receiving Depo died, by claiming that beagle dogs were especially prone to breast tumours.

The results of the rhesus monkey study were similarly dismissed by saying they were dose related. Upjohn's claim that Depo "is probably the safest harmonal contraceptive

drug available" is therefore totally unproven (Bunkle, 1983). So while medical practitioners may prescribe it in good faith, their decisions are based on mis-information produced and controlled by the company that stands to profit.

And profit it has. The first Reagan administration passed the Drug Regulations Act which rendered impotent the FDA ban on Depo sales to the Third World. Drugs judged unsafe for Americans can now be exported provided they are requested by the foreign government. Apart from Upjohn's profits, the assault on Third World women has other advantages:

"Population explosion, unless stopped would lead to revolutions: population control is required to maintain the normal operations of US commercial interests around the world... without our trying to help these countries with their economic and social development, the world would rebel against the strong US commercial presence. The self interest thing is the compelling element" (Ehrenreich, 1980).

Government applying for loans from organisations like the World Bank (with heavy US presence) are usually required to show that they are addressing their 'population problem'. Sterilisation programmes and campaigns of Depo-Provera and other injectables are pushed because they are immediately effective with long-term results.

Why New Zealand?

US imperialism concentrates Depo's three-way assault of racism, patriarchy and capitalism. Like other weapons in this armoury, Depo has been aimed at women in New Zealand.

In 1968, the New Zealand Health Department approved Depo for use as a contraceptive, before the study on its effects were complete and despite its ban in the US. Moreover, it is offered as "one of the many available choices" (Bonito, 1980) rather than approached conservatively.

There are several reasons why Upjohn has chosen to study women in New Zealand:

First, they reveal the highest rate of Depo use for a population whose social and ethnic composition resembles that of the US, where the company ultimately hopes to market the drug.

Second, the subsidised health system here is a great boon because it relieves the company from having to pay for any medical treatment required by women involved in the study.

Third, the ACC (Accident Compensation Corporation) Act absolves Upjohn of all damages suffered by the women. Drug companies have had to pay millions of dollars in the US in damages for the effects of drugs like Depo.

Fourth, since the New Zealand Medical Association monopolises and the state regulates the dissemination of contraception, the company does not have to seduce a wide variety of organisations.

That the power brokers—state and medical—are united in supporting the Upjohn study means the assault on New Zealand women will continue. But the Depo-Provera assault is not distributed evenly. There are definite targets.

In New Zealand, Depo is administered mainly to women who have the least access to contraceptive information; women for whom informed consent has little relevance. For example:

1) One survey revealed that 42 per cent of Maori women and 11 per cent of Pakeha (European) women had used Depo while another concluded that the injection was the only contraceptive method used by a higher proportion of Maori women than European women, (Bunkle, 1982; Trlin and Perry, 1981). This reveals racist attitudes on the part of white middle class medical practitioners who view Maori women as unreliable users of contraception.

2) Working class women—one study discovered that the injection had been used by a higher proportion of women without school certificates and by women whose partners were in the 'lower' status category (Trlin and Perry, 1981).

3) Maternity patients and breast-feeding mothers—one study found that some women were given Depo as routine medication before leaving the maternity hospital and were assured that it would not alter the milk supply. Many were not told what they were being given until it had been administered but being in unfamiliar surroundings and subject to hospital rules they were not in a position to resist or complain.

4) Mental patients and intellectually handicapped women are given Depo on the excuse that menstruation is a 'problem' for hospital staff. This totally ignores the fact that instead of losing their periods some women 'flood' while on Depo. In addition a women admitted to a psychiatric institution, perhaps suffering from some form of depression, "should not be subjected to a drug known to cause depression" (Clark, 1980).

Depo is also given to young women who are considered 'sexually irresponsible'; to immigrant women especially if they are of an 'undersirable' type (i e, non-European); and to post-abortion women.

But by far the largest group using Depo-Provera however, are Black and working class women. Health professionals say this is because these women like Depo and cannot or will not use other forms of contraception. The reality is that women do not make choices about their reproductive lives under conditions that they control.

Black and working class women are under great preassure to accept stronger and more dangerous methods of birth control because an extra child could have quite disastrous effects on the quality of the lives of existing family members. When family planning incentives and dis-incentives are institutionalised as they are in some countries like India these pressures are even greater.

In a capitalist society doctors set up in areas where they can earn most, which means that women living in working class areas see doctors who are typically overworked. Quite apart from any decision those doctors may make about the contraceptive competence of any individual woman, they simply do not have the time to explain various contraceptive methods adequately.

Women are dependent on those who control the goods and the information. One New Zealand study found that 82 per cent of Depo users should not have taken it had they known the evidence against it (Amas, 1984). In India a Net-Oen camp was disrupted when half the women left after hearing about the dangers of injectable contraceptive use (Nair and Balasubrahmanyam, 1985). Women appear to 'consent' to

using dangerous contraceptives but what appears as consent is really submission.

Their 'decisions' are largely determined by the material conditions of their lives including their access to abortion facilities, their ability to support another child and by the limited information they receive from the birth controllers.

Contraception is an important area for gender struggles because as long as men control women's fertility, female sexuality and the work of reproduction will be inextricable linked. What forms have women's struggles against injectable contraceptives taken and how effective have they been?

Women's Struggle Against Injectables

The campaign against Depo was an attempt by New Zealand women's health groups to have the Upjohn study stopped and Depro-Provera banned in New Zealand. By publicising the side-effects of Depo use it was hoped that women could resist being manipulated into participating in the study and or using the drug. But the feminists who campaigned against Depo have been verbally attacked, threatened with libel suits, or dismissed as 'emotional' and 'hysterical'. Upjohn was not about to waste the $ 6 million it had pledged for the study.

The study's essential aim is to produce data that will extend the Depo-Provera stranglehold. Not long after the study began Upjohn was claiming the success of its New Zealand study and claiming that it proved the drug's safety for use in America.

And while even statisticians and demographers criticised the study's protocol they have never been given the opportunity to back up their arguments with the data from the study because this has never been made public (*The Press*, 1983). Completed questionnaires go straight to Upjohn's New Zealand headquarters then directly, without being opened, to Michigan, USA, where data is stored on their company computer. Only Upjohn scientists have access to that data. The 'facts' that are concluded from the study will reflect the male-dominated and profit-oriented structures that created them. The opinions of lay women have no status alongside those of the country's medical experts. The $ 6 million Upjohn was prepared to pay for the study is equivalent to the entire budget of the New Zealand Medical Research Council and must have been an irresistible attraction to those experts.

For women's groups, the struggle was diverted to the more immediate and probably winnable Dalkon Shield crisis. The anti-Depo campaign essentially failed, alongside rumours that new injectables are being secretly trialed at our top medical institutions.

It is interesting for New Zealand women to see the successes of our India sisters in the struggle to ban Net-Oen in their country. Perhaps this is because in contraceptive camps women do not confront the drug or the administrators of that drug alone, but can stand together for a collective refusal as in the example of the Net-Oen camp described above.

But despite the success and failures there are several points that need to be remembered:

Women should struggle against all 'types' of contraceptives rather than certain brands. The adverse publicity created about Depo had no effect on the development, trials and dissemination of similar injectables marketed once the patent on Depo was lifted. The same was true of the Dalkon Shield debate: other potentially dangerous IUDs were left with their reputations intact.

It is also important that women share information across international boundaries and link our struggles so that getting rid of a dangerous contraceptive in one country does not mean that the problem is simply exported to more vulnerable women in some other country.

Perhaps the most effective strategy, and one that has ramifications for women outside the birth control arena, is to empower individual women or groups of women to stand up to the birth controllers. Empowering women means providing them with information to challenge the 'wisdom' of doctors, medical 'experts', technicians working in contraceptive camps and 'scientific evidence'. Information is power and both must be shared for women to take some control of their reproductive lives.

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Work, Ideology and Science
The Case of Medicine

vicente navarro

This article discusses the nature of work, ideology and science in Western capitalist societies. It analyses how capitalist or bourgeois ideology reproduces capitalist dominance in the spheres of production (Section I), politics (Section II), and science and medicine (Section III). Also, this article explains how the working class responds to that capitalist dominance through a continuous process of class struggle. Sections I, II and III show how class struggle affects bourgeois dominance in the processes of production, politics, and science and medicine, respectively. Special focus in Section III is on the analysis of (A) how bourgeois dominance appears in science and medicine; (B) how bourgeois ideology appears and is reproduced in medical knowledge; and (C) how class struggle determines the nature of scientific and medical knowledge. In this section, an alternative mode of production of scientific and medical knowledge, different from the prevalent bourgeois one, is presented and discussed. In all three sections, medicine and medical knowledge are chosen as the primary points of reference.

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"The docs keep telling me there's nothing wrong with the place where I work, I guess they are supposed to know it all because they have had a lot of education and everything. I'm no expert like they are, but I sure as hell know there's something wrong in that mill and other guys are saying the same thing. One thing I know for sure—that place is killing us." — Cancer patient and steelworker from the Bethlehem Steel Corporation mills, Baltimore, Maryland, USA, 1978.

THERE is a concern among the centers of power in the Western capitalist world that something is going wrong with the nature of work in that world. Editorials in the daily press, articles in scholarly papers, reports of powerful foundations, exposé programmes on television, and even more recently, some commercial films have focused on different dimensions and components of what has been called the 'crisis at the work place' in contemporary society. Part of this crisis is the rebellion of the working populations against their conditions of work, rebellions which appear in different forms such as absenteeism, turnover, or just plain sabotage. These have reached such proportions as to become a cause for major alarm by the establishments of those societies. An example of this concern and alram is one of the reports of the powerful Trilateral Commission. A major recommendation of that Commission, which includes representatives of the power structure of the top capitalist developed societies [1], is that "a major intervention is required in the area of work in our societies" to attack workers' discontent and alienation at its roots since, otherwise, those rebellions can threaten the whole survival of the Western economic system—a euphemistic term which is used to define Western capitalism. The representatives of the bourgeoisie or capitalist class, or, to use a more American term, the corporate class, as the most class-conscious of all classes, tend to perceive quite clearly from where they sit where trouble may come from, i e, from the working class rebellion against the main column on which the entire capitalist system is built: the nature and the conditions on which basis work is extracted from the workers [2].

On the other side of the ideological fence, progressive forces in the United States have only recently begun seeing signs of that potential storm. Many, however, still seem to be stuck in that scenario so widely emphasised by ideologists of capitalism and radicals alike that the working class has practically disappeared as agents of change, and, instead, has been absorbed into society, becoming part of the larger consuming and undifferentiated masses. According to some radical theorists, other groups are supposed to have taken over that task of carrying on the much needed struggle for change. The working class, however, has been 'lost', and has become part of that one-dimensional society [3]. Witness, for example, a most recent publication edited by a leading radical in this country who, in covering the changes in the cultural meaning of medicine, refers in his introduction to the impact of blacks' and women's struggles in the redefinition of health and medicine, but not once does he refer to the struggles which are taking place at the sites of work in the Western capitalist societies [4], struggles which I believe are among the most important ones in changing the nature of our society, including the definition of health and medicine. Just in the United States alone, millions of workers were involved in strikes last year which had to do primarily with work conditions and health. From the wildcat strikes among steelworkers in Ohio who asked to change conditions of work and medical regulations which applied in their working places, to the coal miners who struck for three months—threatening, as President Carter indicated, the stablity of the economy, i e, US capitalism—for the right to strike for health and safety conditions and for the right to retain some form of control over their health plans, many instances show that major struggles are taking place at the work place questioning the meaning of work under capitalism and its effects on the health and well being of our working populations. Health-related issues have been triggering points in many of those struggles, and health-related movements have had an important impact on changing the nature of political and social institutions, including labour's own institutions. A most recent example is the key role played by the Black Lung movement in creating Miners for Democracy. That movement rallied the majority of coal miners around the issue of democratising their union, the Union Mine Workers, and overthrowing the corrupt leadership of Boyle [5]. A very important issue—a key one—in that fight was a health related issue, i e, the need to recognise and compensate black lung as an occupation related condition, and the right to strike for safety conditions. The miners fought a tough battle to redefine health and medicine, showing—against the verdict of coal companies, state and federal legislative bodies and agencies, and even large sectors of the academic community—that coal mining was indeed a very unhealthy occupation in our society.

The history of the working class in the United States, and other countries as well, is punctuated by a continuous struggle to redefine the nature of work and health. And these struggles have heightened to such an extent that, as the Trilateral Commission indicates, they are threatening the cur-

rent international capitalist order.

In summary the fight for the realisation of health is very much at the center of the conflict between capital and labour which takes place at the work place and heightens in moments of crisis like the current one. The struggle which occurs at the places of work in our Western societies is a most important one, since it questions the very basic social power relations of capitalism [6].

Nature of Work under Capitalism

Let us analyse the conditions of work of the working class, that class by whose sweat and pain the goods and services in our society are produced. A primary characteristic of work is that its controllers increasingly shape the nature of work to optimize their pattern of control over (1) the productive process; (2) the individual producers; and (3) the collectivity of producers—the working class [7]. By means of this process, the workers are: (a) compartmentalised into increasingly narrower tasks; (b) hierarchicalised by a division of labour which reproduces the class relations in society; and (c) expropriated from all possibility of controlling, influencing or having a say in the design or development of the work process of the products they create.

The outcome of this process is a set of relations which cannot be defined as less than totalitarian. Democracy, the capacity of individuals to control their own lives, stops at the gates of the working places. This set of authoritarian relations where one class—the bourgeoisie—controls that process of production and work, and the other—the working class—doesn't, is what Marx called the *dictatorship the bourgeoisie,* understanding as such not a specific political form of government but rather an overwhelming dominance and control which the bourgeoisie has over the means and process of production. Nowhere for the millions of workers does that dictatorship appear more clearly than at the place of work. Michael Bosque, in his usual vivid way, puts this quite clearly when he invites the reader to

> Try putting 13 little pins in 13 little holes 60 times an hour, eight hours a day. Spot-weld 67 steel plates an hour, then find yourself one day facing a new assembly-line needing 110 an hour. Fit 100 coils to 100 cars every hour, tighten seven bolts three times a minute. Do your work in noise 'at the safety limit', in a fine mist of oil, solvent and metal dust. Negotiate for the right to take a piss—or relieve yourself furtively behind a big press so that you don't break the rhythm and lose your bonus. Speed up to gain the time to blow your nose or get a bit of grit out of your eye. Bolt your sandwich sitting in a pool of grease because the canteen is 10 minutes away and you've only got 40 for your lunch-break. As you cross the factory threshold, lose the freedom of opinion, the freedom of speech, the right to meet and associate supposedly guaranteed under the constitution. Obey without arguing, suffer punishment without the right of appeal, get the worst jobs if the manager doesn't like your face. Try being an assemble-line worker [8].

But these characteristics of assembly line work are not unique to workers in the automobile industry or workers in manufacturing alone. Many other studies have been done showing how assembly line work where the individual worker is carrying out *predetermined tasks* over which he or she does not have much control, is also the most frequent type of work among sales, clerical and large sectors of public service workers. Indeed, that expansion of the atomised hierarchical and authoritarian division of labour growing rather than diminishing in most areas of work in society, and is being presented as needed to increase the efficiency and productivity of the workers, i e, to extract as much work as possible from the worker. But that demand by representatives of the capitalist class is not made without misgiving about how long the working class will tolerate those conditions of work. As a leading exponent of the establishment put it, "How long can our political system stand the seventy million who live the majority of their working hours in an atmosphere which is totalitarian?"[9]

In the following pages of this article, I will explain how bourgeois ideology [by ideology, I mean, with Gramsci, the ethical, juridical, political, esthetical, and philosophical ideas about social reality as well as the set of customs, practices and behaviours which consciously or unconsciously reflect that version of reality] reproduces these dominant/dominated relations in the sphere of production (Section I); in the area of politics (Section II); and in the area of science (including medicine) (Section III). Needless to say, dominance does not mean complete control [10]. The working class does not remain passive against that domination. A *continuous process of class struggle* takes places where the working class also wins most significant victories and determines changes in the boundaries, means and instruments of that dominance [11]. How this class struggle affects that dominance in the world of production, of politics, and of science is also covered in Sections I, II, and III, respectively. In all three sections, *I have chosen medicine and medical knowledge as the primary points of reference.*

I

Work, Market Ideology, and the Reproduction of Power Relations

How is class dominance being reproduced? By different means. For example, the division of labour within the working class, by dividing the labour force into different categories, erodes a sense of class solidarity. Also, tending to reproduce those dominant/dominated relations are the conditions of work, highly hierarchical and authoritarian, which tend to create a habit of submission and subordination, further accentuated by a fear of unemployment or dismissal which tends to produce an obedient body of workers and citizens.

But besides these reasons, there are two others which explain the reproduction of these relations. One, very impotant ideologically, is that this type of work is presented, not as a result of specific power relations in soceity, but rather as a logical, rational, and natural outcome of the unavoidable and unchangeable industrialisation and technologisation of the work process. Thus, the culprit of workers' pains is seen in the unchangeable industrialisation and technology of work rather than in the social power relations which determine this specific type of oppressive industrialisation and technology. Needless to say, the absence in the current historical period of models of alternative processes of production and work strengthens the ideology that ours is the only logical, rational and natural way of organising production. But dominant

ideology tries to impress on the worker that those relations are not only *natural* but also *fair*. This dominant/dominated relationship in the world of production appears as a fair exchange in the labour market in which these exploitative relations are veiled and mystified by making them appear as a matter of free, unfettered and equal exchange between the labourer who sells his labour and the capitalist who pays a wage for it. Needless to say, bourgeois ideology may even be willing to admit and accept that much work today is oppressive and does not offer the possibility for self-fulfilment to the worker. But this same ideology will quickly add that the worker is compensated with a fair wage and that fair wage will allow the worker to obtain the key to the door to his self-fulfillment in the house of consumption. The worker, denied the possibility for creativity and self-fulfillment in the world of production, is said to be given that possibility in the world of consumption. Moreover, while he has no control over the work process, he is being told that he has control over the product of that process where, not as a worker but as a consumer, he can, through the free expression of his wants in the market, allocate the resources in that society. Thus the sovereignty denied to the worker in the world of production appears as the sovereignty of the consumer in the world of consumption. In this scenario, the criteria and discussion of fairness is not over the control of the process of work but, rather, on the price to pay and compensate the worker for his work so that he may reach a sense of fulfilment, control, and pusuit of happiness in the world of consumption.

Suffice it to say, it is of paramount importance for the reproduction of the capitalist system that all struggles at the point of production be shifted to the area of consumption, *with the focus of the struggle being the cost of labour—personal and social wages—rather than the control of the process of production.* The acceptance of this shift in the struggle from the world of production to the world of consumption by the trade unions and their consequent focus on the price of labour has been a primary reason for the reproduction of capitalist relations. As Gramsci indicated "trade unionism by organising workers not as producers but as wage earners had accepted and submitted to the rationale of the capitalist system where workers are merely sellers of their labour power" [12]. The shift from workers to wage earners is a key mechanism of reproduction of capitalist relations and responds to the intrinsic need of capitalism to separate the world of consumption from the world of production, focusing all areas of conflict on the former and not on the latter. Capital, in its position within the class struggle, clearly perceives the correctness of Marx's position when he wrote in the *Grundisse* that, ". . .the important point to be emphasised here is that whether production and consumption are considered as activities of one or separate individuals, they appear as aspects of one process in which production forms the starting point and therefore the predominant factor. . ." [13]. A predominant factor whose control capital cannot allow to be questioned.

A consequence of that bourgeois ideological dominance and acceptance of the *unalterability* of the process of work (and shift of the struggle from the world of production to the area of consumption) has been the acceptance by the unions of damage created at the work place as being unavoidable, and thus the *champ de bataille* has been on the compensation for that damage. Consequently, occupational medicine, a branch of forensic medicine in its beginnings, had, as its initial task, to define for management the nature and size of the damage which needed to be compensated. Occupational doctors, still called company doctors in many countries today, had as a primary function, to defend management interests and obfuscate or veil the actual damage created at the work place. The struggle was, and still continues to be, between labour which demanded a higher compensation, and capital (helped by occupational doctors) who wanted to minimise that compensation, denying for as long as they could that there was any relationship between work, disease, and death. Let me add here that not only occupational physicians directly employed by management, but many in academe, medical schools and schools of public health, supported directly and indirectly by grants or funds from industry or industry financed foundations, contributed to veil and mystify that relationship between work and disease [14].

A further consequence of the separation between the worlds of production and of consumption was that the damage created at the work place, when and if recognised, was perceived to be unrelated to the damage produced outside the work context. Thus, a dichotomy was established between the branches of medicine responsible for the definition and administration of disease at the work place (occupational medicine) and at the non-work place, in the world of consumption (medical care). That dichotomy, production/consumption, is till present today and is being reproduced in the structure of health services with different administrations responsible for those two separated branches of medicine.

In summary, that shift of the struggle around the work place from (1) control of work to compensation for damage; and (2) from the world of production to the world of consumption, has led to the establishement of occupational medicine as a separate branch of medicine historically controlled by management in charge of defining damage and compensation. Needless to say, the priorities within the social system were higher for the medicine of consumption than for the medicine of production, particularly considering that a primary function for the latter—the one of policing the labour force—was achieved under capitalism by other effective means than occupational medicine.

All these struggles on compensation were, for the most part, carried out under the supervision of the state institutions where capital was far more influential than labour, which leads me to discuss the second area where those dominant/dominated relations are being reproducd, i e, in the realm of the political institutions.

II

Work, Politicai Ideology and Reproduction of Power Relations

In the same way that it is of paramount importance for the reproduction of the dominant/dominated relations at work to shift all struggles around the control over the pro-

cess of production to world of consumption, it is equally important to shift those same struggles from the world of work to the world of representative politics. Indeed, just as the worker/subservient relationship is concealed at the economic level of our society under the ideology of consumer sovereignty, the worker/subservient situation is concealed at the political level with the dominated worker being presented as citizen/sovereign. According to bourgeois ideology, people decide through the market what they consume and through the political process what they want. A clear representative of this position is Eli Ginzberg, Professor in the Business School at Colombia University, who begins a book entitled *The Limits of Health Reform: The Search for Realism*, with the following sentence. "In our society, it is till the citizens who, through their voice in the market place and in the legislature, ultimately determine how their resources will be allocated" [15]. According to this ideology, workers become citizens, and as such, have the same rights as the controllers of their work. The assembly line workers are supposed to have the same rights as the controllers of their work. The assembly line workers are supposed to have the same political and juridical weight, according to legislative discourse, as the Henry Fords of America. Both categories—bosses and workers—are abstracted into a new category, the citizens who decide, with equal weight, the major political decisions. In the political - juridical realm, they are both equal. But is it really true that they both have the same power to choose, decide, and develop different political alternatives? Many studies have been written showing that the Henry Fords of America, or of any other Western capitalist country, have far more power—an overwhelming power to shape the nature of what is discussed, voted upon and presented in the political debate—than the assembly line or other type of workers[16].

In order to consider them with equal political power, Ginzberg and others with him have had to consider them as individual citizens, an abstract category which levels off everyone independent of their position in the world of production where goods and services are being produced. But men and women under capitalism are not equal. That assumed equality in the realm of politics is continually shown as inequality in the realm of production. Under capitalism, the relations of production allocate men and women into different social classes, defined by their differential access to and possession of the means of production[17]. Agents within those classes have, indeed, different political and thus juridical power. The class which owns, controls and possesses the means of work has a dominant hegemony in the political - juridical apparatuses of the state and in the ideological - cultural apparatus of society[18]. It goes without saying that the intellectual representatives of that class deny this, dismissing it as a simplification, tolerable for "ideologues" but not for reasonable people. They present it as a matter of fact that the political juridical institutions are an outcome of people's will who, via the electoral process in representative democracy, periodically elect those on whom authority is being bestowed. Consequently bourgeois dominance in the apparatus of representation is denied by burgeois ideology in which bourgeois domination is veiled and mystified as representing the popular sovereignty and the *vox populi*. According to this ideology, the workers, regardless of how exploited in the economic arena they may be, are still supposed to be free and equal citizens who, by their will, have chosen, and continue to choose, a system which reproduces that system of exploitation. This is the most important ideological legitimation of the bourgeois rule, i e, people want it and choose it.

It is worth stressing that in this scheme of things, democracy is not—as Lincoln said—government by the people—but one occasionally *approved* by the people. Democracy is thus defined differently from self-governance. In such a democracy, governments come and go at the approval of the people. In this respect, the government is assumed to represent *we, the people*, and what happens in our societies is what we, the citizens, want. As Etzione recently indicated in *The Washington Post*, "we, in the United States, have decided that we value production more than risk or damage at the work place"[19]. And that *we* is supposed to mean, of course, the American people who have expressed their political will through their political institutions. We, the citizens, have chosen to maximise production rather than safety at work. It speaks of the overwhelming dominance which the bourgeois position has in official and academic discourse, that those authors such as Ginzberg, Etzione and many others can consider these expressions as merely factual and absent of ideological meaning. They would strongly deny, of course, that they are bourgeois ideologists who reproduce the scheme convenient and favourable to dominance of our lives by the bourgeoisie. It is easy to predict that the bourgeois theorists would dismiss as 'rhetorical' the interpretation that it is not we, the American people, but the capitalist class which primarily—although not exclusively—dominates the state functions; and that it is not we, but the controllers of work, who decide on the nature of production and consumption in society. They would, indeed, dismiss that as Marxist "rhetoric". But they do not realize, or want to realize, that theirs is also a rhetoric and one which reproduces a pattern of class power relations where the minority and not the majority makes the major decisions. In summary, each ideological position has its own discourse dismissed as 'rhetoric' by its adversary. The untenability and incredibility of bourgeois rhetoric which assumes that we, the American people, decide on major issues in society, is increasingly clear for all to see. The majority of American citizens who belong to the working class and lower middle class know reality far better than the bourgeois theorists. In many polls, they have expressed their belief that the two major parties are controlled by corporate America and that the government institutions work principally for the benefit of Big Business—that folksy term used to refer to the capitalist class[20].

In summary, then the dominant/dominated relations at the work place are being reproduced by shifting struggles from the world of production to the world of representative politics where the bourgeoisie is the dominant force. It is of paramount importance for the bourgeois order that a clear separation be established between the *economic* class struggle confined within trade union battles (primarily concerned with the price of labour and compensation of work and damage), and the *political* struggle carried out primarily by

the political parties in the realm of representative democracy. As many points in history, from the General Strike in Britain in 1926 to the May events of France in 1968, show quite clearly, the shift of the place and focus of struggles from the place of work to the arena of representative politics has had a most important effect in diluting threats to the bourgeois order. But why this dilution—this weakening of that threat when the area of struggle shifts from the floor of the factory to the parliament? One reason is that representative democracy converts the process of participation *from active to passive*, delegating popular power to elected and/or selected representatives. These representatives, however well they may represent the interests of the working class and popular masses, have to conform to a set of rules and operate within a set of *state institutions where the bourgeois is, by definition, dominant*—a bourgeois dominance which gives its character to those institutions, including the institutions of representation and mediation[21]. Thus, it has always been in the interests of the bourgeoisie to demobilise the mass struggles occurring in the places of production by shifting those struggles to the parliament or its equivalent.

The previous paragraphs should not be understood as shying away from or slowing down the struggles which need to be carried out within the state and organs of representative democracy. *The class struggle carried out within the apparatuses of the state can lead to substantial victories for the working class.* The National Health Service in the United Kingdom, for example, was, no doubt, a remarkable achievement for the British working class. But it would be wrong to consider the NHS as a socialist apparatus within a bourgeois state [22]. I have shown elsewhere how the NHS is under the hegemony of the bourgeoisie, a hegemony which appears in the ideology, composition and distribution of medicine in the UK [23]. Similarly, the occupational health legislation which has appeared in the United States from the late sixties and early seventies has to be seen also as a great achievement for the US labour movement. But the fact that these achievements have occurred within a state that is under bourgeois dominance explains the limitations and the nature of that progressive legislation. The consequences of bourgeois dominance are many. One is that programmes established by legislative mandates tend—*in the absence of continuous pressure from the working class*—to be manipulated by the components and strata of the bourgeoisie which are affected by that legislation. Lobbies of those groups are "always there, close to the corridors of power" to limit and change the progressive impact and nature of those programmes. But, more importantly, those programmes have to operate within parameters which are defined by the overall power relations in that society and which cannot be touched upon by those programmes. For example, great stress is made by all governments that occupational health programmes cannot interfere with the overall pattern of capital accumulation. Capital formation and the subsequent class power relations which it sustains cannot be affected by that type of legislation. And when it is, enormous pressures are brought to bear on governments to assure that that situation be reversed.

Last but certainly not least, another consequence of bourgeois dominance in the apparatuses of the state, including those progressive programmes, is that the implementation of those programmes is carried out within the ideological framework convenient to the reproduction of the bourgeois order. For example, the prevalent approach of state regulatory agencies in occupational medicine is to protect the worker against an environmental agent such as the toxic substance which can harm the worker. Consequently, a struggle takes place around the allowable exposure of the worker to that toxic substance [24]. This struggle *is a very important and needed one*. But it is still carried out within that ideological dichotomy of worker versus environment which assumes and independence and autonomy where the worker is on one side of the working scène and the environment is on the other. The dichotomy of patient or potential patient versus environment characterises, as I will discuss later on, the conception of risk and disease in bourgeois science. In the same degree that the bacteria was perceived to be the external cause of disease, the toxic substance is now perceived to be the cause of that disease. In either case, however, such a dichotomy is a faulty one. The social power relations which determine the environment of exposures also determines the nature of the work process and of the agents of that process, i e, the workers. The social power relations which determine the working environment also determine how the worker fits within that environment, relates to that environment, and perceives himself or herself in relation to fellow workers and to the controllers and managers of that environment. In other words, by focusing only on a specific item of that environment (the toxic substance) and by not touching on the power relations which shape both the environment and the worker, the bourgeois order is reproduced.

III

Bourgeois Dominance, Ideology and Knowledge in Medicine

In previous sections, I have discussed how bourgeois dominance appears in the world of production and in the political-juridical level of society, and how that dominance has many implications in medicine as well. In this section, I will focus on how that class dominance appears also in the production of knowledge in medicine. Many studies have been written showing how bourgeois dominance of our research institutions including medical research institutions has determined a set of priorities that, while presented as apolitical, are, in fact, clear political statements which reflect the class dominance of those institutions. Elsewhere, I have discussed how that overwhelming class dominance of our research institutions explains, for example, why most of cancer research in Western capitalist countries has focused on biological and individual behaviour, but not on other factors such as carcinogens that exist in people's work places which could be threatening to the sections of the bourgeoisie that have a major influence in the funding institutions for cancer research [25].

It would be erroneous, however, to believe that those cancer research priorities are merely a result of the influence of

powerful interest groups in the top corridors of power in funding agencies. There is more to it than that. These groups belong to a class—the bourgeoisie—which has an ideology or vision of reality with an internal logic and consistency which, in turn, leads to the support of some positions, conclusions, and priorities and to the exclusion of others. This bourgeois ideology is the dominant one under capitalism. That it is dominant, however, does not mean that that bourgeois ideology is the only ideology. In this regard, it has to be stressed that each social class had its own vision of reality and ideology. In other words, there is not under capitalism, just a single ideology which is upheld by all classes, races, and sexes. I stress this, because on both sides of the ideological spectrum, there are ideological currents which postulate that there is in any society *just one ideology*—the dominant or ruling ideology—which has resulted from that society's choice, wills and wants (as the bourgeois theorists believe), or from an overwhelming dominance, tantamount to control, which the bourgeoisie has in that society [26]. Agreeing with Marx, I believe that classes have different ideologies which also appear in different forms of culture.

> Upon the different forms of property, upon the social conditions of existence, rises an entire superstructure of distinct and peculiarly formed sentiments, illusions, modes of thought and views of life. The entire class creates and forms them through tradition and upbringing [27].

But one of them, the ideology of the dominant class is the dominant ideology. As Marx and Engels indicated

> . . .*the ideas of the ruling class* are in every epoch the ruling ideas, i e, the class which is the ruling *material* force of society, is at the same time its ruling intellectual force [28].

But this 'ruling' does not imply that the working class ideology is either non-existent or absorbed in the bourgeois one. Nor does it imply that a clear-cut division exists between the two ideologies with a well delineated boundary between them. Class struggle is continuously taking place with victories and defeats which influence both ideologies. For example, I have already indicated in previous pages how bourgeois values appear in the working class. An example is when the working class accepts the belief that the nature of work is determined by industrialisation. And vice versa, the rhetorical (although not actual) acceptance by the bourgeoisie of democracy as a part of dominant ideology was forced by the working class on the bourgeoisie, when the latter social class needed an alliance with the former in its struggle against the aristocracy, then hindering the rise to power of the bourgeoisie [29]. In other words, democracy was not a set of values and practices spontaneously created by the bourgeoisie, but, rather, an ideology forced on the bourgeois ideology by the working class. The bourgeoisie has always fought by all means the expansion of democracy, including the expansion of universal suffrage, freedom of association, freedom of the press and many other freedoms which the working class has had to win with great sacrifice and not without heroic struggle.

In summary, there is, under capitalism, a dominant ideology which appears in all institutions including the institutions of science and medicine.

Class dominance in scientific medicine

How does the bourgeois vision of reality appear in science and medicine? In many ways. Let us outline some of them.

Dichotomy of Science versus Ideology

An extremely important view within bourgeois ideology is that there is a clear-cut dichotomy between science and ideology. Actually, science was the creation of the nascent bourgeoisie and was contraposed to religion (seen as the ideological expression of aristocratic dominance) which it was considered to transcend and supersede. Science was supposed to be a new global vision of reality which would rationalise and legitimise the new bourgeois social system. Galileo, one of the founders of the scientific revolution—and who, incidentally, was working as an advisor to coal owners on how to increase the rate of exploitation of coal miners [30]—established the basis for the creation of new knowledge based on what was called objective observation and not on theology. And that dichotomy, objectivity versus subjectivity, science versus ideology, has lasted throughout the history of science. Science was thus perceived as a body of neutral and value free knowledge built in a painstaking and linear process in which each new scientific dscovery was built upon a previous one. Science and technology became part of the forces of production and as such, their development was considered to be intrinsically positive. According to bourgeois ideology, science and technology (and the process of industrialisation which they determine) were forces of progress, determining, almost in a fatalistic way, the nature and shape of society. The most recent versions of those positions are the ones taken by Daniel Bell [31] and others, who indicate that power has shifted from the owners of the means of production to the managers of the process of that production and, more recently, to the producers—the scientists—of what is perceived as the most important ingredient of production, i e, science and technology.

It is worth stressing here that the bourgeois interpretation of the value free character of science has also appeared within the labour movement, particularly since Stalin [32]. As Sweezy and Bettelheim [33] as well as Lecourt [34] have eloquently indicated, the forces of production, including science and technology, under Stalinism were perceived as neutral. Their development was perceived to be a primary condition for the achievement of a change in the relations of production at a later stage. That change in the relations of production was perceived as needed, because they were retarding and hindering the full development of the forces of production. [Social relations of production are the relations which exist in a given process of production between the owners of the means of production and the producers, a relation which depends on the type of ownership, possession, capacity for allocating and designing those means of production and the use of the products of that process of production. Forces of production are the forces, instruments, labour and knowledge which are organised to produce goods and services in any society. How the forces of production are organised, designed and related among themselves is deter-

mined by the social relations of production.] In this dichotomy—forces versus relations of production—the forces of production were primarily understood as the instruments of production, and their development was considered to be the primary motor of history. The point that has to be stressed here, and Lecourt ignores it, is that instrumentalist understanding of forces of production already appeared in Lenin. It was Lenin who believed that the Western forces of production (including Taylorism) should be imported and put to proper and better use by the Soviet revolution. Lenin was an enthusiast of Taylorism. As Claudin-Urondo has indicated, Lenin conceived science and technology as neutral entities, rather like tools, the function of which can be changed depending on the use being made of them [35]. It should be pointed out that immediately after the October Revolution, a massive democratisation in scientific institutions, such as in the medical ones, took place with changes in the pattern of class control of medical schools and other scientific institutions and with changes in the class origins of the medical profession and other scientists. These changes had quite an impact in redefining the nature of those institutions, and in redefining the process of creating scientific knowledge. That democratisation had a very significant impact in redefining the nature of both scientific institutions and science itself.

The priorities within medicine, for example, changed quite substantially, and initial changes in the understanding of medical knowledge started taking place. This process of democratisation, however, was strongly reversed later on, in particular under the Stalin regime. Class control of scientific institutions and class origin of the scientists were reversed most dramatically under Stalin, giving strong political weight to the experts (scientists and technocrats) who became the controllers and administrators of scientific knowledge, closely supervised by the party apparatus. In this scheme of things, the development of the USSR meant primarily the fantastic growth of the forces of production (including science and technology) and the better redistribution of the product of that process. But it did not change the process of production and work nor those forces of production. The nature of science and technology (and, as I have shown elsewhere, medicine) did not change under Stalinism [37].

Foces of production are not neutral, however. They carry with them the social relations of production which determine them. In other words, a factory or a hospital is not a neutral institution. It is a hearer of power relations which determine how work in the institution is done, by whom, and with what type of instruments. How the work process takes place in these and other institutions in society is determined by the power relations existent in that society. It is not the process and forces of production which determine the social division of labour (as the theorists of industrialism postulate), but, rather, it is the social division of labour, its concomitant power relations and the ideological relations which those power relations carry, which determine the forces of production including science and technology. The power relations in society appear also *within* scientific knowledge, and the bourgeois ideological dominance appears and is being reproduced in the production of knowledge itself. The dominant ideology reproduces itself in scientific knowledge. And this reproduction takes place, not only by selecting the subjects of inquiry, but also by choosing the method of inquiry, and the relations which the researcher or inquirer has within the overall process of production. Needless to say, this position—that bourgeois ideology reproduces itself in science and thus science is value loaded and not value free—is continuously denied by scientists and other bourgeois theoreticians. Science appears as the epitome of objectivity. And all series of ideologies rush to be called sciences to gain legitimacy and credibility in bourgeois society. Not only natural sciences, but a long list of ideological positions appear with the sanction of sciences, e g, business sciences, management sciences, social sciences, political sciences, economic sciences. Sciences become the newly accepted vision of reality which would enable the citizenry to cope with the world in a better fashion. All types of ideologies are thus made compulsory subjects in our scholarly institutions, from schools to academe, provided they are presented as sciences (i e, "value free and neutral"). In this way, while the parents of a ten-year old child would strongly object to having him/her subjected to compulsory classes of a certain religion or certain ideology, they would not object, or would not be given the right to object, if that subject were, or is, presented as a science, e g, economic science. Science becomes that magic word which allows the transformation of value loaded knowledge into a value free one. Thus, the dichotomy of science/ideology constitutes a most powerful ideology for the reproduction of bourgeois relations.

Division Between Experts and Laymen

Once this dichotomy of science/ideology is established, then we have to ask what is science? And the bourgeois response is that science is an objective body of value free, classless and universal knowledge, based on testable observations of reality. As such, the production and reproduction of scientific knowledge takes place place in scientific institutions by individuals who—in the overall social division of labour—have been assigned the task of producing and reproducing that knowledge, i e, the scientists. *Science then becomes what scientists—a small group of individuals in society—do. And scientific medicine is what medical scientists and practitioners do.* Needless to say, all systematic knowledge which is produced outside those institutions, and by individuals other than scientists, is not considered science. According to this criteria, the documents produced by research groups in occupational medicine that concluded in the thirties, forties, fifties and even sixties in the United States that there was not a relationship between black lung and coal mining were supposed to be "scientific documents and conclusions" and thus trustworthy. On the other hand, the knowledge accumulated by generations of coal miners—knowledge which appeared in their culture as folk songs, popular writings, etc—that the work in coal mines was destroying coal miners' lungs was dismissed as cultural, folksy, ideological and in summary untrustworthy. Thus, knowledge is legitimised only and exclusively when it comes from the scientists. This dichotomy of science/ideology then appears operationally as the dichotomy of expert/non-expert in which the control of the definition

of science and expertise is delegated by the dominant bourgeoisie to another class, the petit bourgeoisie or professionals who carry on that task, namely, the production of knowledge under the hegemony of bourgeois ideology.

This last point of delegation raises the question of the autonomy of science. Can science become autonomous from the dominant ideology? My answer is yes and no [37]. Yes, *in the limited sense* that once established, it has an internal logic of its own, i e, the logic of that discipline or branch of science. No, *in the major sense* that scientific knowledge is continuously growing under the dominance of bourgeois ideology. In other words, scientific knowledge and scientific situations are under bourgeois dominance, and that reality shapes the nature of that knowledge. For example, and as I will explain in the next section, bourgeois dominance in medicine established a vision and an understanding of disease in which that disease was seen as the lack of equilibrium within the different parts—organs and humors—of the body. This specific understanding of disease generated a medical knowledge which developed autonomously. But the division of labour within medicine—specialisation—developed according to the bourgeois understanding of disease. Consequently, this internal logic of scientific medicine led to the creation of specialities which follow organistic bases: cardiologists, nephrologists, etc. Thus, medical knowledge developed according to its internal logic given by that bourgeois conception of disease. In other worlds, *bourgeois dominance always determines in the ultimate instance what occurs in the realm of scientific knowledge*[38].

How Bourgeois Ideology Appears in Medical Knowledge

In the previous section, I indicated how the bourgeoisie's definition of science—knowledge produced by an elite, the scientists—appears and is reproduced in our society. In this section, I will discuss how that bourgeois ideological dominance over science appears in the production of knowledge. But, first, let us clarify what we mean by production of knowledge. It is the process whereby a perception of reality is transformed into a specific product, i e, knowledge, a transformation which in science takes place by intellectuals whose primary instruments of work are the theories and methods of science. Scientific theories in each science consist of a group of concepts which belong to that specific branch of science (e g, the law of gravity in physics). Scientific method is the way in which those concepts are used. Both theory, and method allow that intellectual—the scientist—to transform this perception into knowledge [39]. Needless to say, this knowledge is being reproduced, not in abstract but in specific institutions, subjected to class hegemony and by scientists whose very specific visions of reality are moulded by the ideology of the dominant class (the bourgeoisie); their own social class (the petit bourgeoisie); their race; their sex; their discipline; their political position, among others. The scientist does not leave all those ideologies outside the walls of the scientific institutions. The scientists carry those visions of reality in the production of knowledge as well. That production is submerged into and is part and parcel of those ideologies, of which the most important one is the ideology of the dominant class or bourgeoisie.

How does this bourgeois dominant ideology appear in medicine? By the submersion of that medical knowledge into the positivist and mechanistic ideology which typifies science created under the hegemony of the bourgeoisie, and which I would call bourgeois science. Actually, positivism and mechanism appeared as the main ideologies of the bourgeoise in the nineteenth and twentieth centuries in Europe with the works of Hume. Comte, and, later on, Durkheim. According to positivism, science must focus on specifics to build up the general, looking at social phenomena as if those phenomena were natural, ruled by natural and thus harmonious rules. As Durkheim indicated, positivism reduces social phenomena to natural phenomena [40]. And within that interpretation, causality was supposed to be explained by association of immediately observable phenomena.

Positivism appears in medicine in its definition of disease as a biological phenomenon caused by one or several factors which are always associated and observed in the existence of that disease. For example, in one of the most widely used textbooks on epidemiology in the Western world, MacMahon describes epidemiology—the science of studying the distribution of health and disease—as an extension of demography, and he defines that distribution according to age, sex, race, geography, etc, giving major importance to those individual characteristics which are either biological or physical. Moreover, in explaining causality, MacMahon quotes Hume and indicates that causality can only be seen but not explained, since we can only focus on the degree of associations between several subsequent events [41].

A legitimate question at this point is to ask how that positivist conception of medicine came about. To answer that question, we have to go to the origins of scientific medicine as we understand it today. And these origins appeared primarily in the nineteenth and twentieth centuries during the same time that science appeared as a recognised and legitimised area of endeavour. Those were times of large social upheavals and unrest in Europe. Capitalism was being established, changing from a mercantile system to an industrial one. Those changes had an overwhelming importance in defining the nature of medicine as well as that of health and disease. One version advanced by the working class and by the revolutionary elements of the bourgeoisie, such as Virchow, saw disease as a result of the oppressive nature of existent power relations of society, and thus saw the intervention in smashing (the revolutionary) or modifying (the reformist) those power relations. Epitomised by the dictum that medicine is a social science and politics is medicine in a large scale (Virchow), its best representative was Engels whose work on the conditions of the working class in England was a dramatic document showing the political nature of the definition and distribution of disease. His solution was written, with Marx, in the *Communist Manifesto*, with his call for revolutionary change, where the first steps included the actual democratisation of political, economical, and ideological spheres in society. This version

of medicine, however, did not prevail. The bourgeoisie, once it won its hegemony, supported another version of medicine that would not threaten the power relations in which it was dominant. The bourgeois social order was considered from then on as the natural order where its class rules would be veiled and presented as rules of nature. Accordingly, disease was not an outcome of specific power relations but rather a biological individual phenomenon where the cause of disease was the immediately observable factor, i e, the bacteria. In this redefintion, clinical medicine became the branch of scientific medicine to study the biological-individual phenomena and social medicine became that other branch of medicine which would study the distribution of disease as the aggregate of individual phenomena. Both branches shared the vision of disease as an alteration, a pathological change in the human body (perceived as a machine) caused by an outside agent (unicausality) or several agents (multicausality). This mechanistic vision of health and disease is still the prevalent and dominant interpretation of medicine. Witness a recent deifinition of health and disease in Dorland's Medical Dictionary in which health is defined as "a normal condition of body and mind, i e, with all the parts functioning normally"; and disease is defined as "a definite morbid process having a characteristic strain of symptoms—it may affect the whole body or any of its parts, and its etiology, pathology, and prognosis may be known or unknown" [42]. From this mechanistic understanding of health and disease, it follows that the division of labour (specialisation) in medical knowledge and practice has evolved around component parts of that body machine, i e, cardiology, neurology, etc.

A related point is that the mechanistic interpretation of medicine was built upon knowledge which had been generated previously (blood circulation by Harvey in 1628; microscope by Van Leeuwencheck in 1683, and others). But it would be erroneous to consider scientific medicine as a mere linear evolution starting with those previous discoveries. *These discoveries did not lead to or create scientific medicine.* Rather, it was the victory of the industrial bourgeoisie which established that positivist conception of science and of medicine. The fact that those previous discoveries were used and presented as the originators of scientific medicine was due to the change in the correlations of forces and subsequent victory of the bourgeoisie as the dominant class under industrial capitalism. In this respect, scientific medicine was not the linear growth of previous knowledge. Rather, and to use a Kuhnian term [43], a shift of paradigm took place, establishing a new paradigm which carried a new, a positivist, vision of disease which added to what had already been built. This point has to be repeated, because it is part of the bourgeois understanding of scientific knowledge that this knowledge evolves linearly with "new" discoveries based on previous ones, as if these discoveries were the bricks on which the scientific building was constructed [44]. According to this understanding, science and technology grow and determine the nature of power relations in our societies; and the history of humanity becomes divided into stages determined by the discovery of new technologies which shape the nature of that historical stage, e g, industrial revolution, nuclear age, etc. Science and technology thus appear as the "motor" of history. But, as Braverman [45] among others, has shown, the so-called "technological breakthroughs" were not the ones which established new social orders—rather, the reverse was the case, i e, a new correlation of forces used those *already known* technological breakthroughs which were, later on, presented as the actual cause of that change in the social order. But those breakthroughs or scientific and technological discoveries were used and put forward by new correlations of forces. The victory and subsequent hegemony of the bourgeosie, for example, was the one which stimulated science, including scientific medicine. It was this political reality which determined the advancement of the positivist and mechanistic conception of medicine, health, and disease. In other words, the power relations which existed under the bourgeois order were the ones which determined the form and nature of medicine. It led to a scientific inquiry where the aim of that inquiry was the discovery of the cause or micro-organism, and the instrument of that inquiry was the microscope. By focusing on the microcausality of disease, however, science ignored the analysis of the macrocausality, i e, the power relations in that society. Scientific inquiry in medicine developed into a search for the cause: bacteria, parasite, virus or, later on, the toxic substance. Consequently, the strategy of intervention was the eradication of what was supposed to be the cause of disease. Needless to say, that interpretation of disease and of medical intervention was supposed to be presented and perceived only and exclusively as scientific and certainly not political. The dichotomy of science vs ideology was made quite clear and explicit. The alternative explanation, i e, the assumed "cause" was a mere intervening factor and the actual cause of disease resided in the power relations of that society, was dismissed as political, anti-scientific and in some circles perceived also as needing "eradication". In a report of The Rockefeller Foundation on Health in Latin America, it was stressed that there was a great need "to eradicate disease in vast areas of rural South America, otherwise the virus of the tropics will soon attack the metropolis, a virus that can be biological or, even worse, *political*"[46]. A clear call for scientific eradication of undersirable ideological explanations! The limitations of this strategy of eradication based on the unicausal interpretation of disease led to the later strategy of control instead of eradication. But, most importantly, that unicausal explanation was, and is, increasingly abandoned by the multicausal explanation of disease. Disease was later on supposed to be determined by several causes, some of which included socio-economic causes. But these socio-economic variables were added to other causes as if they were independent variables, independent of each other. Social class thus appears as one more variable which may be indirectly associated with the direct and most important explanatory variables. But this limitation of the concept of causality to the immediately observable association between disease (e g, cancer) and other specific events such as smoking, occupation and others is intrinsically limited since it leaves the key question unexplained, i e, how those different events are related. As a recent report on cancer research published by the United States government indicates, "a major defect in most cancer

research in the Western world (and I would add other worlds as well) is that most cancer research has been based on looking for a single or multiple cause, ignoring the interrelations among those assumed causes"[47]. What this report touches on is that the primary cause for our ignorance of the causality of cancer has been a limited understanding of causality, a limitation that comes from the positivist understanding of knowledge which I have indicated. By focusing on statistical association, positivists are touching on the appearance but not on the reality of the phenomena. In other words, what are presented as "causes" are not the actual causes [48]. The epistemological problem thus created cannot be solved either by indicating that those assumed causes are intermediate causes, part of a network of causalities whose linkage among the knots (intermediate variables) can be measured by statistical associations. The actual way of studying disease in any society is by analysing its historical presence within the political, economic, and ideological power relations in that specific social formation. And by this, I do not mean the analysis of the natural history of disease but rather the political, economic, and ideological determinants of that disease, determinants resulting from the overall power relations which are primarily based on the social relations of production. These power relations are the ones which determine the nature and definition of disease, medical knowledge, and medical practice. The understanding of the evolution and causality of black lung in the United States, for example, cannot come from an analysis of the natural history of black lung. It has to come from an understanding of the class power relations in the United States and how the class struggle shaped both the scientific definition, recognition, and knowledge of black lung in the United States and the actual production and distribution of that disease.

What I have said so far should not lead, however, to the opposite conclusion that the inquiry should be limited to the discovery of associations between specific power relations and disease. In other words, it is not enough to establish an association between specific forms of capital accumulation or, say, economic cycles and certain diseases. It is not enough to say that capitalism, for example, determines a certain disease profile. It is necessary to research how those power relations appear, how they are being reproduced, and how they determine the nature of death and disease in society. The different categories of analysis such as world of production, consumption, and legitimation need to be understood in detail and related to the specific mediating mechanisms that those sets of relations have with the apparent "causes" of disease. In other words, what is needed is not the incorporation of the social as mere additions to 'environmental' variables which act on the individual; but, rather, what is need is an understanding of how diseases mediate social relations, i e, how the social power relations determine both the social and physical environment and the individual's experiences within that environment, including disease. Actually, there is an urgent need to break with that new dichotomy of individual/environment which is as false as the old dichotomy of mind/body.

Consequently, the terms of the discourse have to be changed. Instead of using the dichotomy, individual/environment, we should analyse how social power relations determine disease. Taking black lung as an example, we have to understand how the social power relations defined and determined the working and living conditions of the coal miners; how the workers struggled against them; and how, in that context medical knowledge and medical practice came into being to obfuscate or clarify the nature of the damage inflicted on the coal miners. Needless to say, in the process of this struggle, individuals and classes have different knowledge, perception, and ideologies regarding their own experiences, which leads me to the last point I want to stress, namely, the existence of bourgeois science and working class science.

Bourgeois Science or Working Class Science: Utopia or Reality?

Knowledge is accumulated, stored, produced, and reproduced in the daily practice of people's lives. And the nature of that knowledge varies considerably, depending on the social class practices. Each social class has its own practice which appears in its own ideology and culture, i e. a vision of reality; and vice versa, that ideology and culture also appear as class practices. Thus, there is a bourgeois ideology, culture, and knowledge given and reflected in bourgeois practice. And there is a bourgeois knowledge and a working class knowledge. Both classes have different practices which generate different types of knowledge. The knowledge (legitimised under the name of science) produced by the bourgeoisie and reproduced in scientific institutions, which denied, for example, that there was any relationship between work and cancer, was bourgeois knowledge aimed at reproducing bourgeois power and practices. The knowledge (perceived in scientific discourse as 'hot air', 'folklore', or populist culture) produced by the working class and reproduced in its cultural forms, affirming that work was killing them, was, and is, working class knowledge based on experience. From this, I conclude that there can be two types of sciences: a bourgeois science and a working class science, each one based on different sets of knowledge and practice. To deny the above dichotomy is to assume a classless nature of knowledge, and thus a knowledge absent of practice. These two different and even conflicting visions of reality, the bourgeois and the working class visions, are not separated by clear-cut boundaries without one influencing the other. Through the process of class struggle, the working class develops and imposes its own vision of reality on bourgeois science: witness current interest in researching the relationship between work and cancer. This new development is due to a large degree to working class and the general population's outcry on the damage being created at the work place But, still, the hegemony which the bourgeoisie has in all scientific institutions explains the nature and bias of that response, a bias reflected both in the choice of areas to be researched and the means and ways of researching it. The scientist does his/her job in institutions *with* the bourgeoisie. In this respect, the scientist is, to use a Gramscian term, an organic intellectual of the bourgeoisie who explains the reality with and for the bourgeoisie. This relationship of scientist/bourgeoisie is overwhelmingly clear in the United

States where most research is sponsored either by private foundations or by the state where capital's representatives are extremely powerful and influential.

The alternative, the socialist alternative, would be to carry on scientific inquiry *with* the working class, analysing reality based on the extremely powerful knowledge given by the daily practice of the working class, and *under* the direction of the working class.

In this I see a great area of struggle: to democratise the institutions and to change the patterns of accountability of intellectual workers: and to work together with manual workers until eventually that dichotomy of intellectual/manual will be questioned and diluted. No doubt, this change of accountability requires a tough struggle: the one of democratising our institutions. In this respect, it was a great victory for the Italian working class when it won the right to control occupational health services at the factory level and also when it won the right to undertake research at the factory with the researchers chosen by the workers. This is a clear example of how the struggle for democracy and for knowledge are one and the same.

Let me finish by saying that I am aware that many eyebrows will be raised when reading this section of my article. The nightmare of the Stalinist distinction between bourgeois science and proletarian science will undoubtedly be remembered. And the case of Lysenko will be immediately raised as a warning against those dichotomies. My answer to that legitimate concern is that the Stalinist version of proletarian science was not the science developed by the working class (which was not in power), but rather the version given by the Stalinist leadership of the party which identified proletarian science with dialectical materialism as defined and controlled by them. The fact that the agency of control was mislabelled proletarian science did not make that science proletarian, nor does it make the whole concept of class bound knowledge meaningless. That is the mistake of Lecourt [49]. It throws the baby out with the bathwater. There is proletarian knowledge and mass knowledge which will fully appear and will flourish unhindered when there will be mass democratisation in the process of the creation of knowledge with the deprofessionalisation of science, changing not only the class composition of scientists but, most importantly, the method and creation of knowledge, knowledge created not by the few—the scientists—but by the many—the working class and popular masses. As Gramsci once indicated, while all human beings are capable of being intellectuals, only a few are assigned that task. Similarly, while all human beings are capable of creating knowledge, only a few are given that task. Mass democratisation would imply a redefinition and redirection of that process of the creation of knowledge. *This process would not mean, of course, the absence of a division of labour. But it would mean a change in the power relations in the creation of knowledge with a dramatic expansion of the capability of creation of knowledge, with the working class and popular masses being the agents and not the objects of that knowledge.*

In other words, science is a social relation and, as such, the key operational issue is not only *for* what class that knowledge is being produced (the uses of science) but, most importantly, *by* what class and its related question, *with* what class (the class character of sciences) that knowledge is being produced. The failure to understand the importance of these points explains the overabundance of references in which authors continue to search for the perfect socialist scientific method that would enable them to find the socialist truth. That search is not only a theoretical but a practical task as well. *And it requires a political and professional commitment to the working class.* In other words, it requires to break with the role to which the scientist is assigned under bourgeois order and to ally himself/herself with the working class, not to lead that class but to assist it in its potential for human liberation and creation of knowledge. Let me try to be very specific and advance an example of the proposed relationship with which I have experience, namely, two different ways and approaches to find reality at the work place.

One would be the bourgeois or positivist approach to find the nature of a specific health problem (e g, toxic exposures) in a factory and a way of solving it. The 'expert' (epidemiologist or any other social scientist) usually called by management would (1) establish a *hypothesis de travaille* based on his previous knowledge of that problem. Needless to say, it is part of the scientific ideology that he should be "objective" and unemotional about the issue under study. His only aim is to find the truth. As such, he would have a "healthy skepticism" about any subjective statements or situations, relying more comfortably on facts, and very much in particular on quantifiable facts: (2) try to obtain as much information as possible from each individual worker in order to ascertain the facts. Through questionnaires, interviews, medical records, etc, he would try to obtain from each worker as much 'objective' and quantifiable information as he could get and find relevant. He would also try to locate the collective dimensions of the problems by adding up the individual problems; (3) last but not least, he would try to test the hypothesis by statistical manipulation of quantifiable (objective) information.

He would finally submit a report to management's implementation. In that *modus operandi* of research, workers appear as passive subjects of research remaining in the background and not in the forefront in the analysis and solution of the problem. This method of inquiry and data gathering is the most frequent tool used in social science research. The citizens, workers, blacks, women, etc, are studied individually, providing information through key instruments of inquiry, questionnaires or interviews. In all these approaches, three ideological positions—presented as scientific conditions—are that (1) theory and fact are two separate entities of which the former is supposed to be built upon the analysis of the latter; (2) the expert, the holder of proper methods of inquiry, is the active agent while the studied object the worker or citizen is a passive one, i e, the mere provider of information; and (3) collective information is the aggregate of individual information. The process and findings of this scientific inquiry are, of course, presented as objective and value-free (universal and classless) [50].

It is not surprising that in the late sixties, when many anti-authoritarian movements appeared in the Western capitalist world, many of those analysed passive objects—workers,

blacks, women—rebelled against that science and against those scientists. At that time, alternative relations of production of knowledge were established. In many Italian and Spanish factories, for example, workers committees and assemblies were established which rebelled against the type of science that was carried out in those factories. From then on, they did not allow any scientists to come inside the factory and ask them questions [51]. Instead, they developed another approach in which the process of inquiry was carried out under their direction. Consequently, a new production of knowledge took place in which (1) all information regarding the specific health problem was (and is) produced and discussed collectively with the correct understanding that a collective problematic is far more than the mere aggregate of individual problematics. Moreover, workers assemblies have a collective memory and experience that puts their perspective. They know what is going on and what has been going on in that factory process and environment for a long time. And they have first-hand experience with what that problem has meant in their collective and individual health and well-being. Out of their collective discussion, they develop a hypothesis of what is happening in the factory regarding the specific health problem. In that process of generating and collecting data, subjective feelings, anxieties and uneasiness are the propelling forces which guide all processes of gathering both objective and subjective data; (2) the workers call in scientists of their own choosing to assist them in the collection and analysis of whatever data the workers feel needs study. In this process, the workers keep a healthy skepticism about the meaning of science, expertise, and objective information. They scrutinise all objective data, and through the process of mutual validation, they accept the value of the data depending on how it fits within their own perception of reality. It is worth stressing here that many years of exposure to occupational medicine has taught workers the lesson that science is not value free knowledge but very value loaded knowledge, reflecting the values of institutions where science is created and the values of scientists who create that science; (3) once agreed collectively on the nature of the problem, the workers demand to participate collectively in the solution of that problem.

This collective production of knowledge based on collective practice is an alternate form of production of knowledge to the individual production of knowledge, characteristic of the bourgeois model. Needless to say, it puts the scientist in a *different social relation with the subject of study.* It puts him/her in an assistant role with his/her information and knowledge being just a part of a broader and more important knowledge which is created by the practice of the working class. Needless to say, the majority of scientists would oppose that diminution of their protagonism, since it would diminish their power. Many arguments are likely to be used against that change of power relations—ideological arguments presented as scientific arguments to defend specific class interests. The bourgeoisie and the majority of profesionals will oppose that change by every means possible, including sabotage. Still, that the majority of professionals would oppose change does not mean, of course, that a minority within those professions cannot play a very important role in taking sides with the forces for change. But in that process of changing class alliances, they will have to change, not only their roles (from leaders to assistants) but also their methods of work and the social and political context in which they use them. And it will be in that new realm of practice that new social relations and a new science will be created.

Struggle for Democracy

I have shown in the three sections of this article how bourgeois ideological dominance reproduces dominant/dominated relations in the spheres of production, politics and science, including medicine. Also, I have shown how the working class rebels against this bourgeois domination in a continuous process of class struggle, which leaves its mark on all those spheres. The class struggle takes many different forms, but aims at changing and/or breaking with those patterns of domination which oppress the working class and popular masses. It follows, from what has been said, that their liberation requires the breaking of that pattern of control where the few and not the many decide on the nature of our societies. And, by democratisation, I do not mean the mere existence of a plurality of parties and existence of civil rights. I mean far more than that, I mean a profound change in the pattern of control of the spheres of production, consumption, representation, ideological discourse, and scientific endeavour where the many and not just the few control. Specifically, democracy cannot be seen as limited to the passive and indirect realm of representative politics. It has to be seen, as Marx and Engels said, as the massive, active and direct involvement by the collectivity of workers and citizens in the governance of social institutions where they work, reside, study, enjoy themselves and are being taken care of. As Hal Draper has indicated, the greatest contribution which Marx and Engels gave to the history of humanity was to reveal the clear symbiosis between socialism and democracy. As he put it, "Marx's socialism (communism) as a political programme may be most quickly defined, from the Marxist standpoint, as the complete democratisation of society, not merely of political forms" [52]. The struggle for democracy needs to combine struggles in the institutions of representative democracy, where power is delegated to full-time representatives—the "experts" in politics—with, most importantly, struggles to achieve forms of direct and mass democracy where power is retained by the users and workers in all societal institutions. For example, in order to change not only the priorities but also the nature of medical and scientific institutions, there is a need to win control of those institutions, not only indirectly through elected officials in the realm of representative democracy, but most importantly, through direct and assembly type of democracy where workers, employees, users and communities control those institutions. In other words, a socialist transformation will not occur without a massive and direct participation by the majority of the population in that process of transformation.

To sum up, there is a need for the working class, through its different instruments and forms of struggle, to aim at a massive democratisation of our societies, understanding democracy, not as an exercise in voting every so many years,

but, most importantly, as a direct form of participation on a daily basis by the working class and popular masses in all economic, political and social institutions (including the medical and scientific institutions). It is only in this way that the democratisation of our institutions will imply a massive transformation of the majority of our working populations from being passive subjects to active agents in the redefinition of those societies, a transformation that takes place as part and parcel of their becoming the agents and not the objects of history.

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The 'Baby M' Court Case in the US

cindy jaquith

Some months back a New Jersey court gave a ruling on a surrogacy case which has sparked off intense debate in the west on the entire issue of surrogate motherhood. In the Baby M case, the child was taken away from the surrogate mother on the basis of a contract she had signed with the father of the child and his wife. A myriad of prejudices against women and working people—some falsely presented as feminist ideas—have been put forward, along with a generous dose of pseudoscience and mysticism both in the court and outside it.

THE New Jersey court case of "Baby M" reveals a brazen disregard for children. By taking the child away from her mother, Mary Beth Whitehead, and by upholding a 'surrogate mother' contract, Judge Harvey Sorkow has struck a blow against rights the working class has fought for more than a century and a half.

The case began when William and Elizabeth Stern went to a surrogacy agency to hire a woman to bear them a child. Agency head Noel Keane arranged a contract between William Stern and Mary Beth Whitehead. Whitehead signed papers agreeing to be artificially inseminated with Stern's sperm, carry a pregnancy to term, and then deliver her baby to the Sterns for $ 10,000 plus medical expenses. But in the course of pregnancy and the birth of the baby, in March 1986, Whitehead decided she wanted to keep her child, whom she named Sara. She informed the Serns and said they should keep their $ 10,000.

The Sterns filed a suit and immediately got Judge Sorkow to order Whitehead to hand her daughter over to the Sterns. The Sterns then went to Whitehead's house with five cops to seize five-week-old Sara. Whitehead escaped with the child to Florida, but private detectives hired by the Sterns tracked them down. The detectives took Sara away and turned her over to the Sterns, who renamed her Melissa.

Whitehead's Contract

Surrogate mother contracts are similar to involuntary servitude contracts in many respects, and just as exploitative, unjust, and invalid. The woman signs a contract guaranteeing that she will carry a pregnancy for someone else for nine months. According to Judge Sorkow's ruling, she is legally bound to this contract whether or not she changes her mind.

This is bad enough—but even worse given the nature of the rights she gives up. Whitehead relinquished control of her body for nine months with the contract she signed. She had to agree to "assume all risks" of the pregnancy, "including the risk of death." She had to agree to "abortion on demand of William Stern" if the fetus showed signs of "physiological abnormalities," determined by the doctor being paid by Stern.

Whitehead herself could not choose to have an abortion without "breaking" the contract. She also had to agree not to smoke, drink liquor, or use medications not prescribed by the Stern-paid doctor during her pregnancy. While these conditions were imposed on Whitehead, the contract allowed Stern to terminate the agreement immediately if Whitehead had a miscarriage in the first five months. And he wouldn't have to pay her a cent.

The other side of the contract that has no validity is that Whitehead agreed nine months beforehand to surrender a child she planned to bear. This is completely inhumane, both to the child and mother. Under adoption law, a woman has a period of time after her baby is born to decide if she wants to put the child up for adoption, even if she concluded at some point in her pregnancy that this is what she wanted to do.

Women's Right to Choose?

Gary Skoloff, the Sterns' lawyer, made the fantastic argument in court that surrogacy contracts are actually an advance for women's rights. "You prevent women from becoming surrogate mothers and deny them the freedom to decide... it's being unfairly paternalistic and its an insult to the female population of this country," he claimed.

This argument was defended by Jan Sutton, spokesperson of a group called National Association of Surrogate Mothers. "Surrogate child-bearing is not exploitation of women," she wrote in a letter to the *New York Times*. "It is our individual right voluntarily to create a child for another family. To deprive women of this right is clearly a threat to feminist concerns."

Surrogate contracts are not an extension of the fight for women's right to control their own bodies. That fight is to secure the right of the woman to decide when and if to have children, free from interference from the government, church officials, doctors, husbands, lovers, boyfriends, or any other individuals. This struggle has embodied the fight for birth control; sex education; safe, legal abortion; and protection from forced sterilisation. It is interconnected with the broader struggle by women to be treated equally with men in all aspects of society and not be disqualified because of pregnancy, children, or lack of children.

Surrogacy contracts run completely counter to this struggle, what it has already achieved, and the future it points to. Far from an expansion of women's rights, these contracts deny rights previously conquered by women and working people as a whole.

A *New York Times* magazine reporter visited the offices of Noel Keane. "His comfortable, two-story offices in Dearborn, Mich, were full of prospective surrogate mothers, often with husbands and babies in tow, and infertile couples who had come to check out the candidates for surrogacy," wrote reporter Annie Taylor Fleming.

"The well-groomed couples... were each assigned a private office, through which the surrogates were rotated, to proffer their fertility and show off the living, gurgling proof thereof." For each women and eventual baby he successfully markets, Keane pulls down $ 10,000 for himself.

Male companions of the women also get into the business. One man who accompanied his female friend to the office told Fleming, "I'll take care of her when she's pregnant again, but the baby means absolutely nothing. It's like watching someone's car for nine months. We're in it for the money; it's a business." Keane argues that he provides a public service,

that he is showing sensitivity to "the pain and cries" of the "infertile." Judge Sorkow upheld this notion of the 'rights' of the infertile. He ruled that state "refusal to enforce these surrogate contracts... wold constitue an unconstitutional interference with procreative liberty since it would prevent childless couples from obtaining the means to have families."

'Rights' of 'Infertile'

To believe Keane and Sorkow, a new class of oppressed people—'the infertile'—has arisen. No one should deny them their 'right' to 'their own' child, a 'right' supposedly guaranteed by the US Constitution.

But Keane and Sorkow have things turned upside down. The government has an obligation to guarantee that every child has protection and nurture—health care, education, and decent living conditions. This obligation extends to other dependent human beings as well, such as the aged and people who are incapacitated by physical or mental illness.

But the government has no obligation to guarantee every adult the 'right' to 'their own' child. Judge Sorkow claims the law should recognise surrogacy contracts in order to satisfy an 'Intense drive to procreate'. There is no instinctual drive to procreate, however. There is an instinct to have sex—procreation is sometimes a consequence.

The attitude that people must have 'their' child with 'their' genes so they can continue 'their bloodline' or 'family name' is deeply rooted in class society. William Stern presented this reactionary notion in the court case, explaining he had no living relatives because many were killed by the Nazis. He said he needed Whitehead's baby to continue 'his' bloodline.

The Nazis, of course, are the most famous advocates of continuing certain bloodlines. They also ended up trying to exterminate other bloodlines they deemed socially unfit.

Under capitalism, the welfare of the child is not the principal concern nor are the rights of the woman who gives birth. Defining the line of inheritance is. The working class, which has no property to pass on to its offspring, is nevertheless affected by ruling-class ideology about the family. Fears, insecurities, and hopes of immortality, all bred by class society, lead many working people to try to 'continue the family name'. This introduces enormous pressures, with the children being the greatest victims.

Surrogate mother contracts are simply the latest—and one of the most degrading—manifestations of the way capitalism treates children. If surrogacy served some socially useful purpose, it could be argued that society should promote its practice. But it serves no progressive purpose. Humanity is not on the brink of extinction. Many children are being born and many more will be. There is not a social need to increase the number of babies.

Surrogacy is not like adoption, which is socially necessary today. Despite the fact that adoption is immersed in profit-making and that abuses against the children and parents involved do occur, there is a need for this institution to help children without care.

And this is its starting point—not the 'need' of some adults to have 'their' child. The concept of adoption is that society must find a way to provide care to all children lacking it. That's progressive.

The concept of surrogacy is that society owes all adults the 'right' to 'their' child. There's nothing progressive at all about that—it is reactionary.

It opens the door to such things as the international baby racket that has received so much publicity and condemnation. According to the *New York Times*, the number of foreign-born babies adopted in the United States shot up from 4,868 in 1981 to 9,945 in 1986. The real number is undoubtedly much higher. Most come from Asia or Latin America. Some are outright stolen from their mothers by baby dealers; others are torn away under extreme duress by these merchants.

This happens because there are fewer children in this country available for adoption than there used to be, even though racist prejudices still prevent the adoption of many US-born children who are 'not white'. Capitalist businessmen preying on couples without children see a profit to be made, because the baby 'shortage' has driven the price of babies up.

But the fact that there are fewer homeless babies in the United States is good. It marks human progress on several fronts—in relation to society's treatment of children and other human beings, the advance of science and technology, and the advance of women's rights.

In many primitive societies, when it wasn't possible to feed everybody, it was the practice to kill some infants and other dependents. Under feudalism and lasting beyond, the first-born son in the families of the landed nobility had special rights over other children. This practice has also been wiped out.

The brutal exploitation of child labour in textile mills, coal mines, and agriculture has become illegal in this country. The labour movement won this victory, as it won the right to free, compulsory education through high school. A century ago, many children were still losing their parents in shipwrecks, epidemics, or other events. The number of human beings perishing under such circumstances is greatly reduced today in this country. And children without parents live under much better conditions.

Social attitudes toward 'orphans' and 'adopted children' have also been changing in a progressive direction. These children are less often seen as somehow abnormal and deserving different treatment than children who live with a biological parent. Prejudices have also subsided with regard to children born to unmarried women—so-called 'bastards' or illegitimate children.

Humanity as a whole has advanced and deepened its solidarity for all members of society. This has been the product of struggle by workers and farmers. And it is linked to advances in science and technology that have helped working people shed various aspects of exploitation, inequality, and prejudice.

Is Technology the Enemy?

It is important to recognise the progressive role science and technology play—including under capitalism. This is especially true in the light of arguments that surrogate births show society is becoming the victim of technology and predictions that science will turn most working-class women into 'breeders' of babies for the rich.

The trend is actually the opposite—women are having fewer children today than ever before and they have taken gaint steps away from their socially imposed role as 'breeders'. This has happened because of women's victories in the fight for abortion rights and birth control, changing attitudes toward women, changes in women's own self-perception, and science.

Scientific discoveries mean that women today are better informed about sex and health. Access to birth control and abortion, while still restricted to some degree, allows them far more decision-making power about when and if to have children. Technology has also produced labour-saving devices that have greatly reduced the hours women spend on domestic labour, further freeing them to participate in the labour force and society as a whole. Women have seized on these advances to struggle for and win greater rights.

One result of this is a decline in the number of children women have, now that they have more freedom to plan pregnancy or decide not to have children at all. According to the US Census Bureau, the average number of people per household was 2.67 in 1986, down from 3.14 in 1970. There is also greater social acceptance of couples who live together and decide not to have children, and of adults who choose to live alone, also a growing category, according to the Census Bureau.

One consequence is the 'shortage' of children to adopt. A new phenomenon has arisen in relation to this, that of couples frantically seeking 'their own' child, frequently after not having had children earlier in life. Prior to this, many children were adopted by relatives or neighbours who already had children and took in others as an elementary act of social responsibility.

Technology has helped make possible the current situation where there are fewer children to adopt. Technology has benefitted women and all working people—increasing life spans, lowering infant mortality, boosting food production, and reducing labour time. And as such, it is being used by the working class to lessen exploitation and reduce class, race, and sex inequalities. It is not technology that is responsible for abuses like surrogacy, it is capitalism, with its drive for profit and its warping of human values.

Surrogacy is and will remain a marginal practice. Far from being 'the wave of the future', it is actually a throwback to the past. Judge Sorkow's ruling upholding surrogacy contracts has simply opened up the debate about this practice, exposing its real nature to many working people for the first time. On April 10, the New Jersey Supreme Court overturned Sorkow's ban on visitation rights for Whitehead. She now has the right to see her daughter once a week for two hours.

Judge Harvey Sorkow, who presided over the New Jersey trial, called it a "routine custody case". His portrayal of the trial as a dispute between a "father" and a "mother" confused the issues and distracted attention from the exploitative and unjust nature of surrogacy contracts. A custody case usually arises when two people who have been jointly raising children separate and cannot agree on who will get the children. William Stern and Mary Beth Whitehead were never jointly raising Whitehead's newborn daughter and never intended to.

Stern's sole 'claim' to the child was a scrap of paper called a surrogacy contract. In upholding this 'contract', the judge argued that Stern is the 'biological father' of Whitehead's child. According to the judge, this gives Stern a 'right' to "his own biologically genetically related child". Whitehead was merely "the surrogate" hired by Stern to "carry his child to term".

Psychologist Lee Salk, a witness called by Stern's lawyers, went so far to propose that Whitehead be termed a "surrogate uterus" rather than a "surrogate mother", to remove any suggestion that she has a legitimate relationship to her daughter. But it is precisely Whitehead's biological, social, and emotional relationship to the child that is key to the case. Stern's supposed 'biological' connection is irrelevant. Stern is not the 'father' of Whitehead's child. Richard Whitehead, who is living with Mary Beth Whitehead and her other children, is the 'father' in this case. Being a 'father' is not determined biologically (leaving aside the fact that there is no scientific way to prove it was Stern's sperm that made Whitehead pregnant).

Throughout human history, a 'father' has been the husband or companion of a woman who is raising children. It is based on his relationship to the woman that a man becomes 'father' to the children. Due to death, divorce, or husbands who walk away, many women may then live with someone else, who then becomes a 'father' to her children. They remain 'fathers' as long as they are living with the woman and sharing responsibility for the children. In a growing number of cases, women are bringing up children without 'fathers' at all.

Being a sperm donor gives no man a right to raise the resulting child, any more than being an egg donor gives a woman that right. (In the practice called 'surrogate gestation', a woman is implanted with the fertilised egg of another woman. The 'surrogate gestator' carries the pregnancy and gives birth, turning the baby over to the other women. The practice is used in some cases by a couple of one race who hire a woman of another race to bear a child who will also "look like them".)

Neither eggs nor sperm can be the basis for deciding who is the 'mother' or 'father' of a child, or who has the right to bring that child up. It is the woman who carries the pregnancy, gives birth to the baby, and begins nurturing that baby who has the right and responsibility to raise the child—and the right to all the social benefits she needs to do so. The only reason the state should intervene to take her child away is if she is guilty of child abuse.

Nothing of the kind was proven in the case of Mary Beth Whitehead. The Sterns brought into court an army of psychologists and social workers who insisted Whitehead was an 'unfit mother'. Their evidene? Whitehead had a 'narcissistic personality disorder', in part because she dyed her hair; she gave her children pandas, instead of pots and pans, to play with; she had a shouting match with a nun who teaches her son at a Catholic school; she once worked as a dancer in a bar; and her husband was an alcoholic.

Lawyers also proudly pointed out that the Sterns make more than $ 90,000 a year, while Whitehead is dependent on the $ 28,000 her husband makes as a sanitation worker.

But none of this is relevant to whether Whitehead is 'unfit' to raise her child. What is relevant is that she gave birth to the child and began raising that child.

What are Society's Responsibilities?

In the struggle to end women's oppression and guarantee children the best care possible, the working class needs a twofold approach. It needs to fight for women's right to enter the work force and all arenas of society without any restrictions or discriminatory treatment because of their childbearing capacities. It also needs to fight for the government to carry out its responsibility to provide care for children and all other dependent human beings, instead of allowing the burden for this care to fall on individuals, especially on women.

The government should provide lowcost child care from infancy on up. It should guarantee an education, medical care, decent housing, and recreation for all the young, aimed at helping them develop into independent human beings. All laws or practices that discriminate against children—based on class, race, sex, handicaps, or 'legitimacy'—should be eliminated.

The working class must also challenge any disqualification of women based on their having or not having children.

This being with championing the right of women themselves to freely decide when and if to bear children. It means the right to safe, legal abortion and birth control, as well as sex education in the public schools. It means protection of women from forced sterilisation.

Women's physical ability to bear children should not be used as a pretext to super-exploit them on the job paying them less than men, excluding them from certain jobs, or denying them emoloyment if they are pregnant or already have children. The working class should demand equal pay for equal work and affirmative action so women can achieve full equality in employment and education.

Workers should demand full maternity benefits for women, including the right to return to the same job—without loss of accrued seniority time—after the birth of a child. Absence from work because of pregnancy should be treated exactly like other contractual situations related to leaves from work.

For women who have children, the working class should demand all the state aid they need to care for them. And it should defend their right to have the courts compel men who walk away from shared responsibility for children to pay child support.

The struggle for these demands is part of the fight for a different type of government, one that acts in the interests of workers and farmers, not a handful of capitalist families. By bringing such a government to power, working people will lay the basis for further measures to provide care for children and to achieve equality for women

(Continued from p 2)

puterised tomography nor nuclear imaging are tested in the same way as drugs are required to.

Not only instruments but many medical and surgical procedures are also introduced without adequate trails. For instance results of the systematic trial of amniocentesis were published only last year after its extensive use for over a decade. The chorion villi biopsy is already extensively used without any scientific trial. Because of such a situation many innovations like gastric freezing, high concentration oxygen for neonates, the use of hyperbaric oxygen in intensive care, insulin coma for the treatment of schizophreniae etc were introduced without evaluation, used and subsequently abandoned after they were proved ineffective or unsafe.

Amniocentesis and chorian villi biopsy remind us their large scale misuse for female foeticide in India. In fact some of the technological innovation appear explictly geared towards use of sexist and racist cultural practices to gain fast currency and early returns on the resultant technology.

Every country that is attemtping to meet the genuine needs of people, has to take crucial decision about selecting appropriate technologies as an alternative to the costly, rendering services to few and profit oriented technologies. In the field, activists are also required to select and develop alternative technologies to provide immediate relief to people. Therefore, in addition to the technology being a political question, it is also a direct practical problem in political practice. This has led many to experiment with various alternative methods of medical care using simple but effective technology and develop models to prove their feasibility. This question is also linked with proliferation of the non-government organisations and needs detailed discussion.

Such experiments in alternative technologies are not limited to using different physical tools but encompass the way medical care is delivered and attempts to humanise it.

—Amar Jesani

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Strengthening the Cuckoo's Nest?

A Comment on Mental Health Bill

FREUD and subsequent psychoanalysis, psychotherapy and psychiatry have radically changed the worldview with regard to mental health and illness. Western capitalist countries and socialist countries have largely accepted these changes and have evolved structures and legal provisions that provide a relatively better deal to the mentally ill. However, in all these countries the changes have been within the overall framework of social control, which was anyway the purpose of feudal notions of 'lunacy'.

In India, as in most backward countries, the traditional 'lunacy' worldview is still dominant even within the modern legal framework. Mental health and illness in India was till last year governed by the Indian Lunacy Act of 1912 formulated under British imperialism.

The Indian Lunacy Act (ILA) incorporated only a one line definition of a 'lunatic'—"a lunatic is an idiot or a person of unsound mind"—but had as many as 46 sections dealing with how the property of a lunatic should be administered. Between the period of the enactment of the ILA and the new Mental Health Bill (MHB), passed by parliament in 1966, there have been significant global advancements in explaining, understanding and treating mental illness. But the new MHB in India provides only a cosmetic change over its predecessor. It condemns all mentally ill persons, excluding those mentally retarded, as criminals. The new definition of a mentally ill person is "a person who is in need of treatment by reason of any mental disorder other than mental retardation". Thus, apart from excluding the mentally deficient, the MHB is no different in its basic form from the archaic ILA.

Advances in psychotherapy, psychoanalysis and community mental health care, among other alternatives, are not even mentioned in the MHB. The wide range of mental illnesses is ignored. The monopoly of treating the mentally ill is given to psychiatrists who know very little about alternative therapies. For the psychiatrist chemotherapy and electric shocks or even psychosurgery are the only means for dealing with mental illness. Psychiatrists trained in India do not have any significant exposure to even psychotherapy (with the exception of perhaps those trained in NIMHANS), let alone psychoanalysis and other non-invasive alternatives.

This sole reliance on psychiatrists in the MHB will only further medicalise a problem that has largely social origins. Historically, it has been well established in psychological and sociological research that mental pathology stems largely from society itself. Poverty, exploitation, insecurity, alienation and above all class society itself are harbingers of mental illness.

In spite of this knowledge the MHB is no more than a provision for locking up and managing the property of the mentally ill. It is interesting to note that "property" forms the cornerstone of the MHB as in the case of the earlier ILA. For the imperialist powers the ILA was an important means of controlling and manipulating the power structure by dispossessing many uncompromising landed aristocrats and local power brokers of their property by invoking the provisions of the ILA through which any magistrate could declare a person mentally unsound (without any aid of a medical professional). What the MHB has done is to shift the onus of establishing mental "unsoundness" from the judiciary to the psychiatrist. Thus the enactment of the MHB is consistent with the dangerous trend of the general medicalisation process of human health—*it is more a police bill than a health bill.*

Though on the whole psychiatrists have been critical of the MHB and have demanded amendments, the Indian Psychiatric Society (IPS) has welcomed the medicalisation and the provision in the bill for admission of mentally ill patients to privately run psychiatric nursing homes, besides government owned psychiatric hospitals, which alone were authorised earlier to admit such patients.

In fact the main interest of the psychiatrists in pushing this bill was to gain this provision. This provision too is consistent with the general trend of privatisation. However, in the same breath the IPS has strongly condemned the provisions for licensing and inspection of private psychiatric practice by a state authority—the IPS plans to approach the supreme court to rid the MHB of this latter provision (but it will not challenge the MHB itself)!

Medicalisation and privatisation of mental health care will only worsen the situation for the mentally ill. Further, as regards rights of the mentally ill person there is only passing reference with regard to protecting the patient from 'cruelty' of a practitioner. But this toothless protection is overridden by the fact that the family, state and the medical profession have full control over the patient physically, mentally and socially. The decision-making about diagnosis, therapy, admission, treatment and discharge are vested in the patient's family and doctor. The patient has no say whatsoever in the matter. Therefore a patient suffering from a simple neurotic condition may easily face confinement if the family (for instance in a family property feud) or the state (for instance in case of an ideological adversary or a political prisoner) sanction so on behalf of the patient who supposedly is incompetent to make a decision about his/her well-being.

Thus on the human rights front the new MHB fails completely. If at all, it strengthens control over mentally ill persons clearly abrogating their fundamental rights and implicating them as stigmatised and unlawful citizens.

Hence the MHB needs to be challenged not only by psycho-professionals of all variety but also by civil rights groups, lawyers and social scientists. The MHB's basic form needs to be changed from a social control perspective to a human rights perspective Mental illness and health conditions need to be defined in detail and the independence of the mentally ill person needs to be protected. The protection should have a social basis, and under present conditions can be best ensured with the assistance of civil rights groups and the judiciary. All concerned, therefore must strive to make the MHB biased in favour of the mentally ill and not against them.

Ravi Duggal

Indian Workplace: 'Safe', 'Clean' and 'Healthy'?

A BILL amending the Factories Act has been passed by the Lok Sabha some months ago. While the Bill for the first time accords to workers some rights which had hitherto never been recognised, it needs to be dissected thoroughly. For the present it is interesting to note that even those rules regulations and norms which have been in force for decades continue to be ignored or openly flouted. Take the case of reporting of accidents and occupational diseases. Anyone looking at the data presented year after year in the *Indian Labour Journal*, the official publication brought out by the Ministry of Labour, would marvel at the safe, clean and healthy environment in Indian industry!

Take a look at the accident figures for three years—1981, 1982 and 1984 (the latest). In 1981 there were a total of 3,41,423 injuries of which 740 were fatal. In 1982, 3,02,268 injuries of which 599 were fatal and in 1984 there were only 1,15,442 injuries of which only 381 were fatal. Data was not available for 4 states in 1981, for 5 states in 1982 and for 9 states in 1984. While the figures are not strictly comparable because of inadequate reporting, it is interesting that the proportion of fatal accidents is less than 0.5 per cent in all the years. The accident rate, as everyone but the very naive knows, is extraordinarily low and is in no way related to the real situation. Injuries are reported only when a worker is incapacited by them and thus a large number escape being recorded.

The case of the non-recording of occupational diseases is even more interesting. In 1981 there were 13 reported case of ODs, all of them being chrome ulceration. In 1982, there was a sharp jump in OD with 101 cases—with apparently an epidemic of silicosis (87 cases), all from Madhya Pradesh! In 1984 there was a sharp drop to 27 cases and all of them chrome ulceration again. Even more interestingly, the only state being troubled by OD was Maharashtra for no cases of OD were reported from anywhere else in the country! That the case reporting either of accidents or of ODs is atrocious has been highlighted in these pages some years back (*SHR*, Vol I:3). The article on 'Illness and Accident Reporting in Industry' had pointed out that the reporting has consistently declined since 1960. But is this very surprising given the fact that the number

of medical inspectors of factories had been 11 in 1981, went up to 42 in 1982 and down again to 10 in 1984? Given this kind of situation, what role do amendments ostensibly strengthening the Factories Act play—especially given the fact that workers' health has not been a prime concern in the labour movement in India so far?

PP

Eyesight Problems Among Workers

THE electronics industry is the largest employer in the production sector in Malaysia. Upto October 1986, there were some 70,000 workers, most of whom are women.

Eyesight problems are reported to be occurring frequently and at an alarming rate among workers in electronics factories. Those affected come from the semiconductor assembly section. The work here requires the workers to use microscope daily to tie wires to pieces of semiconductors which are almost invisible to the naked eye.

According to a survey published in the book, *Health Hazards in Electronics* by Thomas H Gassert, 44 per cent of the workers in American-owned electronics factories in Malaysia complain of eyesight problems while 42 per cent complain of headaches.

The survey revealed that the eyesight problems are due to the use of microscopes and TV monitors as well as exposure to chemical vapours, smoke and dust on a long-term basis.

Eye diseases such as conjunctivitis are caused by chemical vapours and can spread from one worker to another because the same microscope is used by several workers. This problem is made worse by the long hours of work. Salaries and bonuses are paid based on a quota system and the quality of work done. Hence, many workers may be driven to work hard, without sufficient time or rest.

The survey also found that many companies do not teach the staff the proper use of the equipment. Microscopes and TV monitors which are defective are also not repaired.

Noisy machines can also harm the electronics factory workers as the noises can lead to hearing loss and can cause tension which will lead to other health problems.

In electronics factories, some machines such as the metal stamping machines and the packaging machine are very noisy. The use of ultrasound to tie and test components also emits noise at a high level.

The safe level of noise, according to *Health Hazards in Electronics*, should not be more than 60 decibels and 16 kilohertz for an eight-hour working period.

The book says that loss of hearing among electronics factory workers is due to prolonged exposure to a noise level above 80 decibels.

This exposure can also cause tension which will eventually lead to other problems such as hypertension, increased heart-beat, vein disorder, irritability and a lack of concentration. All these in turn may lead to accidents at work, cause muscular tension, nausea and headaches.

Utusan Konsumer, March 1987

Campaign to Ban Hazardous Drugs

THE Drug Action Forum, West Bengal has initiated an interesting campaign for a ban on the manufacture and sale of unscientific and harmful fixed-dose combination of chloramphenicol-streptomycin. They have been circulating a letter to manufacturers requesting that they stop manufacturing these products. The letter is signed by 270 practitioners of West Bengal and sets out the reasons why they feel a ban is necessary.

The letter points out (1) that the combination has not been recommended against diarrhoea in any standard textbook of medicine and there is no scientific basis for such use; (2) that chloramphenicol is a valuable drug, the drug of choice for typhoid and its indiscriminate use may cause the development of resistance to typhoid bacilli; (3) that streptomycin is not absorbed through the gastrointestinal tract and is besides a first line drug in the treatment of tuberculosis and is in perpetual short supply; and (4) that there are many effective alternative treatments for diarrhoea when needed.

For more information contact WBDAF, P 254, Block B, Lake Town, Calcutta 700 089.

Women's Health Care in Brazil

carmen barroso

In 1982, the ministry of health in Brazil decided to present a comprehensive programme of women's health. The programme was drafted by four doctors, two of whom were feminists and clearly reflected the politics and the philosophy of the women's movement as it had been evolving in the previous decade. The author who was closely associated with early efforts in this direction writes about the problems encountered in evolving the plan and in implementing it.

BACK in 1982, I was helping the electoral campaign of a candidate for governor in the state of Sao Paulo, and together with a handful of other volunteers, I was in charge of drafting the items on women's health to be included in his campaign agenda. It was not easy, I can tell you!

To begin with, the very legitimacy of having a special programme for women was questioned. Again and again we had to argue that yes, all human beings are entitled to good health care, *but* women do have special health needs, both because of their biological reproductive functions and because of the sexual division of labour prevalent in our society. Other arguments had to do with priorities and there we were repeating that: Yes, we knew that infant mortality rates were unaceptably high, *but* did they know what maternal mortality rates were? Or: yes, we agreed that work-related accidents and illnesses that reached both men and women should be greatly diminished, but wouldn't they also agree that women did have a right not to have to resort to clandestine abortion?

When feminism, after decades of demobilisation, reemerged in the Brazilian political scene in the mid-seventies, the overall national priority was the struggle for democracy and the prevailing idea was that a focus on women's specific issues was divisive and self-defeating. Even where women's subordination was acknowledged, it was dismissed as an unimportant political question, a mere byproduct of class exploitation or a cultural tradition that would naturally disappear as a consequence of the development process. Forgive me the oversimplification but, as I said, I am referring to the prevailing ideas, those that set the climate where a project can grow or fade away. And feminism managed to flourish quite well thanks to a strategy of downplaying women's specific issues and to restricting them to those in the sphere of production. It thus managed not to alienate important partners in the struggle for democracy: the left and the catholic church.

But, by the end of the seventies, it was not possible to continue ignoring women's daily struggle to control their reproduction. The fertility rate was going down quite rapidly. And that in all regions of the country, in all social classes, and even in the rural areas. The demographic figures only became available several years later, but whoever had any contact with the poor soon became aware that pills, tubal ligation and clandestine abortion—no matter their high costs—were more and more widespread. And what was more surprising was that Mothers Clubs and other grassroots organisations—most of which had been created in the sixties under the umbrella of the catholic church—having evolved from their traditional handicrafts and religious activities to the active mobilisation to press local governments for urban services, were now presenting a new demand. Can you guess what? Sex education! The rationale presented was that they needed information in order to guide their children. But as soon as the question period was open after a given lecture, the issues that used to come up were those of frigidity and power relations between the couple.

Why did these problems begin to emerge in public? Intensive migration and the growth of megalopolis had resulted in the severing of traditional family ties and neighbourhood groups. That, together with increasing work alienation, had helped to raise the expectation towards couple relationships as a major channel of personal fulfilment. Besides, women's access to the mass media—especially to TV romantic *novels*, which were reaching 75 per cent of urban homes in 1980—all acted together to question the use made by many men of women's bodies. The word *use* does not reflect my intention to shock you: it is the common euphemism used by rural women to mean sexual relationship (and that certainly tells us something about the quality of this relationship!). To cut a long story short: the fact was that tensions were mounting in the bedroom, and these were showing up in group discussions whenever poor women had an opportunity to speak.

The year 1982, as you know, was when the debt crisis came to the forefront and the country had to resort to the IMF structural adjustment policies. As always happens in crisis situations, the old neo-malthusian ideology came out of the closet again as an apparently easy solution to the difficult economic problems. In 1983, sectors of the military, together with private family planning organisations drafted a plan to curb population growth. This raised the same fears prompted by similar attempts made in the sixties and seventies. The major fears were: diversion of government efforts from the root causes of poverty, foreign intervention on national priorities and open doors for coercion of poor people to have fewer children.

But at that point those arguments were no longer strong enough to resist the creation of government programmes. On the one hand, the advantages of fast population growth, an argument which was popular in the sixties, had long been discredited. On the other hand, contraceptives were widely available to those who could buy them, and it was difficult to deny that, in the absence of government support, poor women were going through tremenduous sacrifices in order to regulate their fertility.

What happened then was that, instead of just opposing the population control plan, the ministry of health decided to present an alternative: a comprehensive programme of women's health. Drafted by a committee of four doctors, two of them feminists, the programme embodied a set of principles the women's movement had been formulating through

its practice in the previous years.

It started with a thorough diagnostic of the causes of mortality and morbidity among women over 10 years of age, which numbered around 45 million in 1980. Free health services provided through the public system or through the social security system had been mostly limited to pre-natal and natal care, and grossly inadequate both in terms of coverage and quality. The new programme was based on the idea of comphrehensiveness. Services should not be restricted to reproductive functions, they should include cancer prevention and the control of sexually transmitted diseases, and be integrated with general clinical care. Married women of fertile age were not to be the sole clients. Older women and adolescents were also to receive adequate care. And public services should include both the provision of information and all means of contraception and infertility treatment.

An important element of the preventive aspect was the educational component. In order to enable women to take control of their own health, they should have access to needed information. But much more than that, they should have the opportunity to develop the attitudes conducive to the effective use of this information. That is, instead of the prevailing authoritarian doctor-client relationships, health services should contribute to the enhancement of self-esteem and self-respect, so that women could have pleasure in taking care of their own bodies.

All this was very beautiful and very nice on paper. But a small and inexperienced staff at the ministry of health had to spend an enormous amount of time in political negotiations to make the programme viable. Opposition came from two main sources: at first, from the democratic sectors who did not trust the military government and suspected the programme to be just another disguised population control initiative. This mistrust vanished gradually with increased transparency of the decision-making processes and the election of Tancredo Neves in 1985.

The other sector was the catholic church, whose teachings have little impact upon the practices of the members of its congregations, but whose hierarchy is very vocal. The ministry diligently courted the church and apparently managed for a while to get its agreement to look the other way But the church became very active again last year, when the social security system jointed the programme. The church efforts are now aimed at restricting the availability of what they consider unethical methods of contraception, that is, barriers, pills, IUDs and all others not based on periodic abstinence.

But, in spite of this resistance, some important achievements have occurred. What has been most remarkable has been the adoption by the health system of educational practices developed by the women's movement. It is now quite well-established that doctors, nurses and semi-literate health assistants, all need refresher training, and many in-service programmes throughout the country have aimed both at technical updating and at clarification of attitudes and values.

Educational materials originally developed for consciousness-raising groups have been widely used in small-group discussions where health workers of all ranks have, for the first time, a chance to analyse critically their practices and assumptions about women as clients. The techniques used put an emphasis on respect for differences of opinion among group members, and are quite revolutionary in the sense that they cut across hierarchies in the workplace.

Another important innovation is that sex education is now a key element of the training programmes. Reproductive health issues cannot be separated from sexuality. Just to give an obvious example: if a woman cannot use a diaphragm because she cannot bring herself to put a finger inside her vagina, nothing will be accomplished by technical instruction. So sex education starts by re-examining the educational practices of our society that taught us to have shame and fear of our own bodies. And this, of course, is related to women's role in society. Therefore, a little history of Brazilian women is introduced in some of these training programmes.

As most health workers are themselves women, their evaluations of the educational programmes often point to self-awareness as an important by-product. But the ultimate aims of those programmes are two-fold: first, to influence the overall attitude of the worker towards the clients, who should be respected as autonomous human beings in charge of their own health and reproductive decisions; and second, to prepare the workers to conduct similar training sessions with the clients. This has begun to happen in many units, but it still depends largely on the initiative of interested workers.

An evaluation carried out in late 1986 pointed out as the major achievements of the programme, the development and printing of educational materials and norms of clinical procedures. These norms refer to sexually transmitted diseases, pre-natal care, breast and cervical cancer prevention. Family-planning norms have been developed put are not printed yet. Norms for childbirth are still in the drafting. The programme has also supported the development of national technology in the areas of spermicides and diaphrams. However, the units where the programme has been effectively implemented still are not more than a hundred, distributed among a few states.

What lies ahead for the future? I think it will depend on three widely different factors. First, the success of the programme requires an administrative reform to give it efficiency it now lacks. As it stands now, the decision-making is highly centralised and the decision-process quite bureaucratised. And this, of course, has greately delayed its launching at the local level.

Secondly, the future of the programme is tied to the future of the women's movement in at least two ways. Women will have to remain active as a pressure group at the central levels of government so that the the church hierarchy does not succeed in curtailing the scope of the programme. On the other

hand, at the local level, clients increasingly aware of their rights will have to keep a constant eye on the quality of the services to avoid abuses and a tragic gap between intent and consequences.

Thirdly, resources for the programme depend on the solution to the debt crises. At the moment the programme is mostly supported by a five-year grant from UNFPA. But even so, the programme relies basically on the smooth running of the public health services. And, as you probably know, Brazil has been exporting capital to the industrialised countries in the last few years. A large proportion of the GNP is going to service the debt, the balance of payments is going down due to increasingly unfavourable terms of exchange, government revenues are being sharply cut. In this scenario, institutional stability is threatened. At the level of the health services, a most likely outcome is a sharp drop in the already low salaries of health workers. They become demoralised and spend a large proportion of their time fighting against salary cuts.

If common sense prevails, and new economic agreements allow the economies of the third world to resume growth, the Brazilian health programme will be strengthened, its difficulties corrected. Since it corresponds to such great needs, and it has been drafted with such audacity and care, it deserves this chance.

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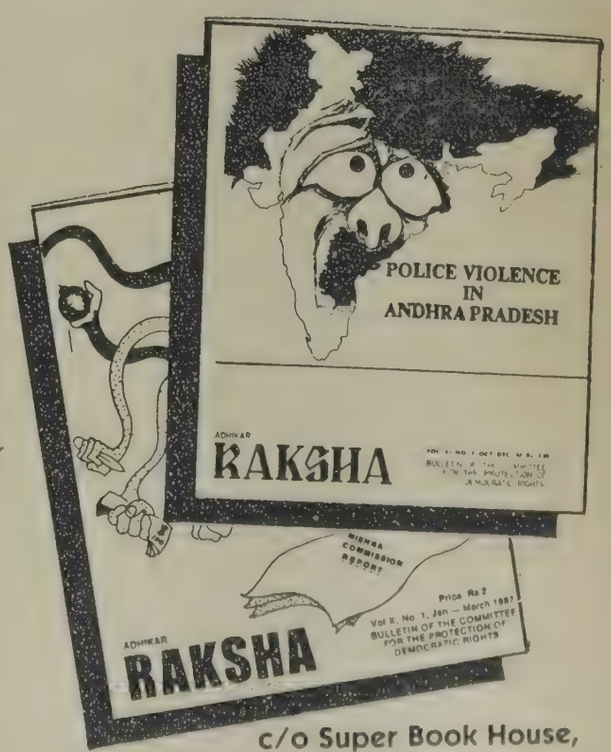
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Explosion of Alternative Information on Drugs

CAP Reports on Drugs and the Third World. *Chloroform—Sale and Hazards: a Malaysian Study*; no 9: *Pizotifen—Double Standards in Marketing*, no 11; *Cyproheptadine—Risks and Unethical Marketing in Malaysia*, no 12; *Stanozolol—Toxicity and Unethical Marketing in Malaysia and the Third World*. Consumers' Association Penang, Malaysia, 1986.

Consolidated List of Products Whose Consumption and/or Sale have been banned, withdrawn or severely restricted or not approved by governments, II Issue, UN, 1987.

IN the last couple of years, with the emergence of a vocal and visible consumer movement all over the world, has come about something of an explosion of alternative information in these areas. Until very recently, information about consumer products, etc, was the monopoly of the industry. Even the governments of most third world countries did not have access to data such as the hazardous nature of a drug, its side-effects if any, whether the drug was banned in other countries of the world, etc. This had a direct impact on the drug consumer movement in that the arguments of the drug companies were difficult to counter in the absence of relevant alternative information.

Thus breaking the information monopoly has become one of the prime objectives of the consumer movement, especially the drug consumer movement. Most groups all over the world have been producing volumes of literature which is very useful in showing up the drug industry for its unethical practices. All the publications under review fall into this category and are themselves a reflection of the growing strength of the movement.

The Consumer Association of Penang (CAP) brought out a series of reports in 1986 aimed at providing the public with the results of some of the important areas of CAP's activities.

The first of the series is on chloroform. The study finds that in Malaysia "despite all the documented evidence of its dangers, chloroform is present in many products". Strengths below 10 per cent are exempt from the Malaysian Poison Ordinance 1952 and the Poisons List 1983. Chloroform is a commonly used ingredient in cough preparations. Interestingly, the Drug Index for Malaysia and Singapore lists only three preparations under chloroform containing products. And yet the study has found numerous others in the market. It has also drawn attention to the inadequate information available especially with reference to the hazardous nature of the product, particularly when consumed by children. A review of the advertising of these products in the lay press has also been undertaken. Of the other three booklets, two are on antihistamines and one on an anabolic steriod. All the three were presented to the ministry of health, Malaysia in July 1986. In October the government announced that these three drugs had been banned. Manufacturers and distributors were given three months to withdraw all products containing these drugs.

Although pizotifen, an antihistamine, is classified as a Group C poison, the study group found that it could be easily bought over the counter. The drug used in the treatment of migraine in developed countries is heavily promoted as an appetite stimulant in Malaysia. No contraindications are ever mentioned. Similar is the case with cyproheptadine, another antihistamine drug. In the US only one preparation of the drug, Periactin is marketed and is indicated for use in allergy conditions and as a supporting drug in anaphylactic reactions. The study finds that the company, Merck, Sharp and Dohme is practising double standards in its marketing of the product in developing countries.

The Consolidated List is in a sense a triumph of the drug consumer movement all over the world. In 1982, because of pressure from these groups, the UN General Assembly "aware of the damages to health and the environment that the continued production and export of products that have been banned and/or permanently withdrawn on grounds of human health and safety. . . is causing in the importing countries" and because many of these countries lack adequate information suggested to the secretary-general that a Consolidated List be prepared of products whose consumption and/or sale have been banned, withdrawn or severely restricted or not approved by governments. The list was to be easily readable, and was to contain both the generic as well as brand names. Needless to say, this sent shock waves through the multinational drug industry. The pressure that was put on the group entrusted with the task to leave out the brand names, is a telling illustration, if one were needed, of the enormous political influence that the industry wields on governments in the developed countries as well as in the third world.

The first issue of the List came out in December 1983 and again was the target of much flak from the industry and vested interests. The Coordinating Committee had to make a sustained campaign to scuttle the industry's move to do a hatchet job on the List, and all such future publications.

The current List is a 655 page volume listing 600 products (100 more than the last one). It is basically in three parts—pharmaceuticals, agrichemicals and industrial chemicals. It records the status of each of these products in all countries (or at least as many as have provided the information). At the end of the volume is a list of brand names of these products.

It must be stressed that this is the first time such information is available in a consolidated manner in one volume. Every effort must be made to keep the initiative from being killed. For one thing, governments either because of the usual bureaucratic problems or because they are under pressure from vested interests, are not very prompt in providing information about changes in legislation regarding particular products. It is here that voluntary groups could play a role.

PP

Workers' Health and Labour Militancy

gerald markowitz

The Struggle for Workers' Health: A Study of Six Industrialised Countries by Ray H Elling, Baywood Publishing Co, 1986, 500 pages, $ 37.50.

US workers face a multitude of dangers on the job and the Reagan administration has been largely successful in hobbling the Federal Occupational Safety and Health Administration (OSHA) and state regulatory efforts. This book puts the problem in an international perspective, with very disturbing results. Elling shows that even at its best, OSHA compares very poorly with other capitalist countries' occupational safety and health systems.

Elling uses a Marxist framework to analyse occupational safety and health (OSH) problems: "Most if not all OSH problems stem from the inequitous exploitation of relatively powerless workers engaged in producing value which is expropriated for the private use of a ruling elite," he states. Elling surveys the history and political economy of the countries he studies, and details the OSH system in each. The countries studied are the US, Britain, the German Democratic Republic (DGR), the Federal Republic of Germany, Finland and Sweden.

Elling compares six elements in the countries' OSH systems: policy, sponsorship and control, education, organisation, information and financing. He concludes that Sweden and the GDR have developed the most comprehensive systems for protecting workers' health; Finland's system is somewhat less strong. Britain and the Federal Republic of Germany rank much lower, and the US offers workers the least protection, he concludes. While acknowledging that his conclusions are tentative, Elling's analysis is extremely useful for both activists and researchers.

Elling maintains the single biggest factor determining the quality of a country's OSH system is the strength of its workers' movement. In Sweden, for instance, 95-98 per cent of blue-collar workers are organised and 70-75 per cent of other workers are unionised. As a result, Sweden has developed a system that is light-years ahead of the US (where only 18 per cent of workers are unionised).

Swedish policy seeks to insure that employment is fitted to the health requirements of workers. Sweden's concept of health is also unusually broad, taking into consideration not only physical conditions but also the use of "piece work, shift work, incentive systems, and psychosocial factors related to physical and mental illness." For instance, Swedish research has shown that the degree of control workers have over their work affects their rate of coronary disease.

At the core of the Swedish system are 1,11,000 safety delegates elected through their unions. There must be a delegate in every plant with at least five employes. These delegates are empowered to interrupt work that poses an immediate or even long-range danger to workers. Every workplace with over 50 employees must have a joint labour-management safety committee in which workers are in the majority. The committee helps hire plant physicians and safety engineers. Sweden's system cannot even be compared to the US's non-system. Here, only workers who are represented by health and safety conscious unions like the Oil, Chemical and Atomic Workers can expect protection. Even so, Elling notes that Swedish workers are subject to some of the same pressures as those in the US. Even in Sweden, workers can be cowed by management threats to move or shut down in the event of costly health and safety demands.

Elling suggests that only a revived and militant labour movement can improve the US's abysmal health and safety system. But by describing what workers have won in other capitalist countries, Elling shows that the fruits of struggle can be crucial to workers' well-being.

Gerald Markowitz is coeditor of "Dying for Work" (Indiana University Press) and "Slaves of the Depression: Workers' Letters About Life On the Job" (Cornell University Press). Baywood Publishing Company is at Box D, 120 Marine St Farmingdale, NY 11735. Reprinted from *The Guardian* (US), August 8, 1987.

Systems Approach to Problem-Solving

Agencies Working Together: A Guide to Coordination and Planning by Robert Ross, Kevin Gilmartin and Charles Dayton, Sage Publications, 1982. Price $ 7.95, pp 119.

THIS publication is part of the Sage Human Services Guides Series (Vol 28). It is an attempt at delineating various approaches to inter-agency coordination based on an actual study of such coordination in the state of California. With a spate of NGOs working in the field of 'human services' the need for effective communication and coordination between various agencies, so that they can help each other, also increases. In essence this book is a guide written for all sorts of welfare and social service agencies. It discusses various methodologies and approaches 'tried out successfully' that can help build up effective inter-linkages between agencies in order to provide better services to their clientele.

The book is useful for those who feel that a systems approach solves most problems in management.

RD

Medicine in USSR
Analysis Lacks Rigour

anant r s

BOB DEACON's 'Medical Care and Health under State Socialism' (*RJH* Vol I.1) starts on a very sound note. In the first part, it separates six main aspects of socialist health care and shows that there is much more in real socialist health care than what the traditional left thinks it to be—widely available and almost free medical care. An analysis of medical care in any post-revolutionary society would be inadequate, unless it systematically goes into the aspects dealt with by Deacon. I would add two more aspects to a really socialist communist health care: (i) rational use of drugs and other medical facilities (investigations, hospital-beds, etc), (ii) a clear break from a medicalised attitude towards healthproblems (an attitude which believes that 'there is a pill for every ill', and still worse looks upon all deviations from the upper class white male model as abnormal or even all physiological phenomenon as health problems to be solved by medical therapy).

In analysing the Soviet medical policy, however, Deacon is not careful, or rigorous enough. The empirical basis of his conclusions is, therefore, quite problematic.

For example, he makes the usual mistake of comparing Soviet Union with advanced capitalist countries—the European Economic Community. This is an ahistorical comparison. These EEC countries were far ahead of Russia at the time of Revolution in 1917, and hence we should compare Russia of today with say Portugal or Italy which were also like Russia, quite backward, at that time. The USSR is even today backward in some respects as compared to the United States or some imperialist European powers. This in itself does not mean at all that Russia is not socialist or socialism is worse than capitalism.

In assessing whether or not USSR is spending 'more' money on health care, Deacon makes a second added mistake of taking the medical care expenditure of capitalist countries as 'standard'. It is well known that advanced capitalist countries were overusing drugs and other medical facilities, that the medical-industrial complex is a big racket. Hence if a country is spending less on medical care than these stupid civilisations, that by itself cannot be taken as a bad thing. An appropriate indicator would be to find out what percentage of medical needs are being met and in what manner. Admittedly this is a difficult indicator to quantify and we may not get proper, comparable data about this. But some rough estimation can be made. A rough estimation in a proper direction is better than a precise estimation in a wrong direction: If medical expense as an indicator of better care is to be taken, then the comparison has to be made with the pre-revolutionary situation. Finally, we must remember that the ultimate aim of a socialist society would be reduce the necessity of medical care and hence the relative proportion of medical expenses as well.

Deacon has properly drawn attention to the both 'relative and absolute rise' in USSR in the so-called 'disease of modernisation' like cardiovascular diseases and cancer. But more information is needed to draw valid conclusions. As infectious diseases decline, even in a really socialist society, more people are likely to die of degenerative disorders. In the imperialistic countries a very large number of people die prematurely (in their forties or fifties) of these degenerative disorders because of the unhealthy 'American way of life'. One must know whether such a premature morbidity and mortality in the USSR exists or not, is rising or not and whether (like in western capitalist countries) it can be traced to wrong kinds of food, work environment, social environment and so on. The rise in the USSR in "the age-adjusted death rate by 18 per cent over last decade" as quoted by Deacon is an indicator. But we need more information before drawing valid conclusions.

Deacon's article contains hardly any information about whether or not the domination of doctors as experts, over paramedics and the patients, the philosophy of 'the-doctor-knows-all-and-hence-will-decide-all' has decreased in the USSR or not. The lowering of the status of doctors in terms of their pay-scales and privileges is different from changing the role of expertise. In the absence of proper specific information on these aspects (point numbers nine to twelve in his table no III), his conclusions on these points cannot be taken as valid.

If all these and such points are rigorously taken into account to find out the *trend* (and not merely a static picture in a particular year), one has a hunch that one would come to the same or even more critical conclusion than Deacon's. USSR is a state socialist society which has gone far ahead of many comparable capitalist societies but cannot be called a socialist society in the sense in which Marx understood this concept. But one must be aware that Deacon's conclusions in this article are not based on solid evidence.

Lastly, a word about the sexual division of labour in medical care in the USSR. As pointed out by Deacon, 90 per cent of primary health care physicians in the USSR are women. This is quite in contrast to capitalist countries wherein males overwhelmingly predominate in this position. But in the USSR, in the thirties and forties, the status and pay-scales of engineers and scientists were kept much higher as compared to doctors since the planners gave higher priority to these skills. This tradition still persists, though it now appears to be changing. Men predominated in these more prestigious, more paying fields and women went to less prestigious, less paying positions of doctors. This shows that though USSR has got over the typical sexual division of labour as found in capitalist medicine, a different mode of sexual division of labour has taken its place; and has stabilised—something one does not expect in a truly socialist society. Deacon has missed this point in his discussions of medicine in the USSR.

Politics of MCH

padma prakash

MANISHA GUPTE's article (*RJH*, I: 2) provides a broad framework for analysing health policy vis a vis women. The needs of capitalist accumulation mediate through patriarchal structures and relations suppressing women's rights to health and reproduction. This mediation takes different forms in different societies. In a country like India, it is interesing to look at the process by which the needs of capitalist development have simultaneously strengthened and altered patriarchal structures. It is especially necessary to take cognisance of the manner in which the Indian state has coopted and adapted the demands of a 'democratic' polity for its own purpose. The history of maternal and child services in India provide an illustrative example of this. In the evolution of policies and programmes directed at the welfare of mothers and children especially in recent years, it is possible to discern the way in which the state has, responded to the growing influence of the women's movement and has accomodated the demands of the increasingly vocal and influential consumers of health care. 'Programming reproduction' is just one aspect of MCH services. Further, there is also the question of how progressive movements must view such policies and programmes.

As early as the mid-nineteenth century concern for maternal health motivated a series of efforts. This concern was, of course, somewhat spurious. Introducing 'modern' methods of maternal and child care had served multiple objectives. Firstly, it was seen as a means of approaching women so as to "educate them. . . show them the beauties of christianity, for only then would the regeneration of India be a reality and the conversion of its people an accomplished fact".

Secondly, the MCH movement in India even in its limited spread, enlarged the base of operation of 'scientific' medicine which in England was becoming highly organised and sex and class biased. The MCH rhetoric of the time saw indigenous maternity practices as the main cause of the high maternal mortality and held modern practices, especially in hospitals not only as being progressive but safer and more hygenic. It was to staff these new lying-in hospitals that Indian women were encouraged to take up medicine. This is especially ironic since at about the same time women in Britain were fighting bitter battles to be allowed to train for and practise medicine. Clearly the move in India had little to do with encouraging women to enlarge their sphere of activity in society, but more with the needs of the colonial government.

Thirdly, the promoting of modern maternity practices through the MCH movement fitted well with the philosophy of the reform movement advocating women's education in India—so that as mothers they would be capable of giving birth to and bringing up a new generation of progressive Indians. The MCH movement became a vehicle for bringing about this 'regeneration' of India for both the British and the Indian liberals although it meant different things to the two. Its outreach however, was confined to the upper classes in the urban areas in the presidencies. Needless to say it hardly had any impact on the maternal mortality or child mortality in the country.

MCH continued to be a priority area in the health policies of independent India. The Bhore committee continued to view these services as not only a measure for reducing maternal mortality but as a necessity in order that women could adequately perform the function of motherhood. Facilities for the protection of women's health in the 'productive' sphere were mainly meant to ensure her 'reproductive' adequacy. But at the same time the maternity and child welfare centre "with its combined attack on the health and social problems of the Indian home" was expected to play a vital role in the programme of 'national reconstruction'.

Increasingly however, investments in the reproductive health of the woman became far more important than her health in the factory or the field. "The protection of the health of the expectant mother and her child" (irrespective of whether she occupied a place in the sphere of production) became of paramount importance "for building a sound and healthy nation". The mother became officially recongised in policy as the channel for 'educating' the entire family. After this although MCH continued to be a national programme its focus became increasingly narrow and its implementation poor. Quite apart from the fact that MCH programmes did not recognise the real causes of maternal mortality their impact on the section of the population which accounted for a large proportion of maternal deaths was minimal. Interest in MCH also began to decline. (For example, there were hardly any ICMR research projects in the area after the mid-sixties. This disinterest in the health of the mother is manifest even in those areas outside MCH which had some import for maternal health. For instance, research in anemia—increasingly the focus became narrow and oriented towards developing quantification methods which all but ignored the real problems in the area.)

Recent years have seen a revival of interest in MCH which has to be seen in the context of other developments such as the status and location of women, the current priorities of the state as well as the pulse of popular/mass movements.

In the last decade a great deal of attention became focussed on women's status and issues affecting their status. This decade, the UN Women's decade ironically enough, also saw a deterioration in the economic situation of women. Much work has been done on how the development processes have in fact been the cause of women losing their jobs and the means of livelihood—as for instance happens when the introduction of new technologies in agriculture results in women having to give up their traditional occupations, or when modernisation of processes handled by women in industry results in the loss of jobs.

At another level, the only sector which has recorded a growth in employment, the service sector, has also registered a significant rise in women's employment. In other words it would not be wrong to infer that while the

economic and social status of women of the labouring classes is rapidly declining, women who have access to formal education, generally from the better-off layers of the urban working class and the middle class, are finding jobs in the expanding service sector. This in turn contributes to the growing purchasing power the middle class which provides a market for the products of the expanding consumer industry. This factor has to be kept in mind when assessing the purported objectives and the real impact of any programme such as the MCH.

Secondly, there is the undoubted impact of the women's movement not only on national policies but internationally as well. The movement has had the result of highlighting the low social, economic and health status of women. Indices such as maternal mortality suddenly became major issues which needed to be tackled or at least should appears to have been dealt with.

Thirdly, the health status, health care structure and the priorities of health care have undergone a change. One could well hazard a guess that the class differential in health status has become sharper than ever before (See for instance NIN's nutrition surveys which actually shows a decline in consumption levels—although of course, the NIN has grossly tried to cover it up). Inevitably the sex differential in health status would also have sharpened. As a consequence the class biases in health care delivery have become clearer. In addition, the trend towards increasing privatisation as well as the more widespread use of the fee-for-service principle even in state health services will aggravate the disparities in people's relative access to service. Inevitably of course, the priorities of health programmes have also changed.

All this has to be taken into account in understanding the real nature of MCH programme. Because the state needs to sustain the growth of the purchasing power of the expanding middle class, women's employment in certain spheres is a desirable goal. Thus health care for women so that they are able to handle the two spheres of activity becomes a necessary service which the state accepts responsibility for. Promoting the small family norm is again desirable—both so that resources can be optimised as well as because the process of socialising children to fit into patriarchal society can take place efficiently.

Thus for instance, quite clearly, the nutritional supplement component of these programmes is irrelevant to the section of the population who cannot obtain two full meals. Pumping an expectant mother with vitamins when she has abominably low calorie intake is an absurd exercise—and the state is well aware of it. The component is really meant for a different class—the small farmer/lower middle class, where there is just about sufficient food but not enough to take care of the extra needs of pregnancy. On the other hand, the anganwadi programmes may well be used by all sections, including the poorest women who may then be 'released' to work the fields without encumberances or alternatively at the EGS sites thus increasing the numbers on state dole (which accrues to the image of a welfare state).

But most importantly these programmes are redifining and restructuring the role of women in patriarchal class society at the present juncture. Beginning with the breastfeeding campaign, the immunisation programme and the anganwadis, the woman's role in the upbringing of the child is being redefined. The concept of the family with its hierarchies as the primary socialising institution in capitalist patriarchal society is being reemphasised. Investments of all kinds in the family and in children are rising. In order to ensure the continued existence of the family, the ruling class has to reetch the female stereotype which will accomodate the new feature of an employed mother and wife. The setting up of a department for women and children cannot be regarded merely as a response to the pressures of the women's movement. It has a necessary role to play in drawing up a new image of Indian womanhood. It is in this context that we have to assess any programme, whether in health or otherwise, directed at women.

How then do we regard these programmes? Should we reject them entirely? Or can elements of these be used to advantage to weaken the very structures which the state is trying to strengthen?

While this needs to be tackled in a more elaborate manner, here are some pointers . For one thing, any critique of state services—especially in MCH—must ensure that the trends which emerge as a result do not reject state services by opting for more expensive and perhaps less efficient private care. This will only mean that the tendency of the state towards ridding itself of its welfare obligation will get an added boost. On the other hand, by highlighting the inadequacies of the service, there is an opportunity to initially pressurise for better service but in the long run also to show up the non-viability and insincerity of the welfare goals.

At the same time the sexist and class bias of these services also need to be brought out in the open. The fact that these programmes project a model of Indian womanhood which reinforces existing norms which themselves need to be challenged is a task that the health groups and the women's movement must take seriously. And this is a difficult challenge—it comprises not merely in confronting the real objectives of state services, but in tackling the inherent sexist and class ideology of the medical establishment.

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On Headaches

It's beautiful to be a communist
even though it gives you lots of headaches.

And the thing is that the communist's headaches
are supposed to be historical, that is to say
they don't go away with aspirins
but only with the realization of Paradise on Earth.
That's how it is.

Under capitalism our heads ache
and they decapitate us.
In the struggle for the revolution the head is a time-bomb.

In the construction of socialism
we plan headaches
which doesn't make them any less frequent, just the other way around.

Communism will be, among other things,
an aspirin the size of the sun.

roque dalton (El Salvador)

ll December 1987 No 3

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Reinterpreting Homoeopathy

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Responsibility of Industry, Doctors and Government

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Pharmaceuticals: Limitations of Left Perspective

WHAT are the issues that arise when we are discussing the relationship between pharmaceuticals and health? There are three types of issues. First, the issue of the general relationship between pharmaceuticals and health. Second the role of pharmaceuticals in capitalism, and especially monopoly capitalism, as well as that in state socialism and revolutionary socialism. Third, the objective and the standpoint of the Left movement in India as regards this issue of pharmaceuticals and health. Let us take a brief overview of the various sub-issues involved in these three aspects of this problem.

Contrary to what the drug industry or the technocratic ideology would like us to believe, drugs have played a marginal role in improving or maintaining the health of the people. In a way this is obvious because it is clear that health-status basically depends upon food, water, sanitation, environment, working-conditions and cultural atmosphere. Moreover, until recently, therapeutic efficacy of medicines was very low. In ayurveda, the ancient Indian approach to health and disease, what is notable, (given the primitive tools of enquiry available in those days and given the dominance of idealist tradition), is its materialist outlook—not much scope for spirits and the like. It is however a controversial issue as to what extent ayurvedic medicines have been effective and safe. That they have been used for hundreds of years does not necessarily mean that they have been effective and safe. In the west things were probably worse. Medical professionals had very few useful medicines to offer to the patients (less than the folk-people had) till as late as late 19th century. Many of the remedies were of the nature of blood-letting, branding and the like or use of corrossives or other drastic and harmful substances as medicines.

The era of safe and effective antimicrobials, anti-biotics, started from 1930s and most of the antibiotics and other 'wonder drugs' came after the second world war as a part of the third industrial revolution and post-war restructuring of the imperialist system and its boom. By this time, however, most of the major infectious diseases in the west had already declined substantially. Now it is well-known in informed circles that modern drugs have thus not played an important role in the improvement of the health-status in the west. It is basically the improvement in the general living standards (food, sanitation, housing, work, education, etc.) which did the job. In the developing capitalist societies, these powerful catalytic agents—the modern pharmaceuticals including most importantly the vaccines—have hardly realised their potential because the socio-economic conditions are inimical. This can be seen from the case of megapolis like Bombay. Here we have drugs and doctors (including specialists) available in every lane, but tuberculosis, leprosy, venereal diseases and even polio show to sign of the respite. China, which is a quite comparable out of the capitalist straight-jacket has shown how modern drugs can be a powerful aide in the rapid control over the scourge of infectious diseases when social conditions are favourable for such a control.

The so-called 'diseases of industrialisation' (which are the diseases of monopoly capitalism and the culture it breeds—cardiovascular diseases, injuries due to accidents, cancers, diseases due to obesity and psychiatric problems—cannot be cured with drugs. On the contrary, the overuse of drugs in such disorders lead to a number of iatrogenic health problems.

It may be argued that the above is a rather simplistic statement. Yes, indeed, it is; it being a brief statement of a standpoint about a historical phenomenon or trend. There are some phenomenon which do not quite fit into this scheme. But that does not alter the overall picture. Secondly, to point out the marginal role of medicines in improving health status of population is not a criticism of modern medicines but of technocratic, self-servicing ideologues who overplay the role of medicines. There is no doubt that modern medicines have a tremendous catalytic potential and even in absence of favourable social conditions, they have made human life more tolerable that what it could otherwise be. But its wrong to attribute more than this to medicines.

The question of the role of non-allopathic medicines is a perplexing one. Homeopathic and allopathic medicines have entirely different presuppositions, are of entirely different nature, both qualitatively and quantitatively; yet both help in different degrees and instances the human body in its recovery from illness. It is a theoretical puzzle as to how this can happen. This discussion cannot, however, be separated from the one about different disciplines of medical care—homeopathy, ayurveda, unani and others. Secondly, this question is also related to the question of the very method of science. Statistical criteria are used to decide the efficacy of medicines in allopathy. How can this be done in homeopathy and ayuveda when their basis is that of individualisation? Is there a way out? Is the very notion of scientific criteria as used in allopathic science open to question? Is there any alternative scientific method? Can there be? There are a long list of such questions which do not seem to lead us anywhere.

One thing is, however, definite. Research into these systems needs to be given more resources—financial and otherwise. At the same time, unless the efficacy and safety of the non-allopathic medicines have been proved through research, by some intelligible criteria proposed by the authorities in these systems, these drugs should not be allowed to be commercially produced.

Capitalism and Pharmaceuticals

Drug technology was one of the branches of technology, which stagnated for quite sometime even after the advent of the industrial revolution in Europe. The knowledge of human body in health and disease and the development of chemistry was too meagre for quite some time. It is only in monopoly capitalism—the advanced stage of capitalism—that enough resources could be pumped into research in these complicated sciences and it is only then that diagnosis and treatment of diseases could flower into a discipline solidly based on modern science. Modern pharmaceuticals is essentially a product of monopoly capitalism. This same monopoly capitalism has, however, at the same time, become an

obstacle in the path of the full and proper use of modern pharmaceuticals. Monopoly drug companies restrict production and jack-up prices to ensure monopoly profits by using methods characteristic of monopoly capitalism, a lot of irrational and even harmful drugs are pushed onto the consumers. In India and other peripheral countries, this occurs in a very crude manner wherein the market abounds in useless, irrational, harmful products which fetch higher rates of profits. This is at the expense of essential drugs which are at least under some price-control. In the rest, this phenomenon takes place in a more subtle form through a technocratic consumerist ideology of 'pill for every ill'.

The full flowering of the science of pharmaco-therapeutics is also adversely affected by monopoly capitalism. A lot of resources are wasted in inventing 'me-too' drugs which have no significant advantage over the existing ones, but which can be marketed as 'new and better' through aggressive monopolistic marketing techniques. Social resources are also wasted in attempts to prove through 'scientific research', really harmful drugs as safe, or useless drugs as very effective.

Monopoly multinational drug companies represent a classic case of how modern imperialism operates. These monopoly MNCs have on the one hand introduced the fruits of the development of modern science of pharmaco-therapeutics into the third world countries. On the other hand, their monopoly, imperialist interests demand that a part of the surplus value created in the drug industry be pumped off to the imperialist centre; that the drug industry in the peripheral countries be dependent on the imperialist centre so that this sector remains one of the channels of more profitable investments and easier markets. The methods employed to achieve this aim are scandalously bad-production and marketing of the most irrational, irrelevant, and even harmful products at rapaciously high prices through blatantly unethical marketing practices; and the suppression of development of indigenous technology by recourse to 'fair' and foul methods characteristic of monopoly capitalism. The results are more disastrous than they are in the west, since the wastage of and suppression of resources means too much pressure on a weak economy and the impact of cheating and exploitation is much more significant for the poor people who constitute the majority in these peripheral capitalist countries. The contrast between the potentiality of using modern science and technology for the betterment of humankind and the reality of a stunted, distorted development is much more poignantly seen in case of the drug industry in the peripheral capitalist countries.

Contraceptives as a group of drugs need a special mention. The invention of the birth-control pill is regarded by many as one of the important milestones in the path of women's liberation. In reality it is only a defence mechanism for women in the world of patriarchal capitalism in which safe, effective male contraceptives are neither developed nor used adequately. Contraception is considered as the woman's responsibility. The availability of the effective pill in a society wherein women are seen as objects of sexual gratification for men has also meant women's bodies being available 'anytime' without the fear of them getting pregnant. This is convenient for patriarchal men since they can achieve the twin benefit of free sex, and small number of children, without any responsibility or botheration of use of contraceptives.

For the women in peripheral countries and of the ethnic minorities in the imperialist centres, hormonal contraceptives are becoming in addition, a burden on their already poor health. Patently unsafe injectable contraceptives and subdermal implements have given the capitalists, patriarchal state a powerful instrument to enforce its programme of population-control in these countries—at the expense of health of the poor women. Pharmaceuticals which are supposed to enhance feminity are another example of the crude sexism practised by the drug industry.

Pharmaceuticals in Socialism

Human beings would of course continue to fall ill under socialism and communism. The pattern of diseases would, however, be quite different from those in undeveloped capitalism or in monopoly capitalism since this pattern is decided primarily by the nature of social production and the set of relations encompassing it. It would be an idle speculation as to what kind of health problems would exist then and which drugs would be used. All that we can say with certainty is that in socialism and communism, there will be less and less of illnesses and hence less and less necessity of use of drugs in diseases.

In 'existing socialisms' alias state socialist societies (USSR, China, etc.) conditions are, of course, quite removed from this ideal. But the use of pharmaceuticals in these countries is not vitiated by the narrow needs of a profit-hungry drug industry and hence is quite rational. But there are some problems. For example, the widespread use of the injectable contraceptive,-Net-En in People's Republic of China shows that patriarchal relations are present there to quite a substantial extent. In more developed societies—USSR and countries in the eastern block, the disease pattern is not qualitatively different from that in the capitalist west. This, however, does not mean that drugs are overused and misused like in the west since there is no profit-mongering drug industry in these societies. It would be interesting to study the precise nature of use of pharmaceutical in these societies, whether, and to what extent there is any irrationality in the production and use of drugs and why.

Standpoint of Left Movement in India

The Left parties and groups have criticised foreign drug companies as part of their anti-imperialist standpoint. During last six or seven years a lot of concrete work has been done to demonstrate how specifically MNC drug companies exploit and cheat the Indian people and how they thwart the Indian sector. There are, however, two problems in these criticisms—firstly, most of this work has been done by Left intellectuals as part of their research project or by Left activists, as part of the broader 'democratic' science or health-groups to which we belong. This has put certain limitations on the standpoint that is expressed in these analyses and has even put limitations on the very thinking of Left activists. There is a need to a pause and think about these limitations.

In certain academic institutions, financed by the government, there exists a liberalism among decision-makers and hence it is easier to get a research-project to study the impact of MNCs on the Indian drug industry. This liberalism is in tune with the interests of the Indian state; because such

studies fall within the limited anti-imperialist standpoint of the Indian state. The interests of the Indian bourgeoisie demand that MNCs be pressurised into allowing more and more leeway to Indian capital to exploit the Indian people. Studies focussing on the negative role of MNCs are, therefore, even encouraged by the Indian state. Such studies unearth a lot of valuable anti-imperialist material which can be used by people's movements in their thorough-going, revolutionary anti-imperialist struggle.

But a more or less exclusive focus in these studies on the role of MNCs by omitting a critique of the Indian sector is more helpful to the non-revolutionary anti-imperialist struggle of the Indian bourgeoisie. There is comparatively less concrete research in such studies on the anti-people role of Indian companies—and of the public sector. A critique of the Indian sector does not necessarily mean neglecting the distinction between MNCs, Indian private companies—(monopoly and non-monopoly) and the public sector. But a comprehensive critique is perhaps not encouraged. It is no accident that a majority of these studies directly or indirectly financed by the Indian state omit the Indian sector from their critique.

Popular education and propaganda, based on these studies have an ideological, political role of limiting the critique to only the MNCs. The fact that many Left analysts have a limited, anti-imperialist (understood in a narrow sense) political perspective which excludes an important role of a critique of the Indian sector, also helps to sustain this unnecessarily narrow focus. In terms of demands also, the focus of most of Left analysts is limited to the demand for nationalisation of MNCs. In our strategic demands, we should ask for nationalisation without any compensation and with workers' control/democratisation in the nationalised industry. These strategic demands are for the public education of what is possible in the coming stage of the revolution; and hence the fact that the health movement is too weak today, is no argument including this strategic perspective in our study and propaganda.

Criticisms mounted as part of a health or science or consumer group have an advantage in that such criticisms bring into focus the question of irrational and hazardous drugs, misleading propaganda by the drug companies about the efficacy and safety of their drugs and so on. Here again, misdeeds of Indian companies are generally not mentioned. But the demand for banning of irrational and hazardous products, is such that no concession can be given to the Indian sector whose performance on this score has been no better.

As a part of the 'democratic' health/science/consumer movements, Left activists have participated in bringing forward the medical (sometimes feminist) issues and demands. But many such groups do not take a political stand against even imperialism; leave aside Indian capital even though the concrete demands made by such groups and their implications are many times anti-imperialist, anti-capitalist. But a lack of a clear political anti-imperialist, anti-capitalist stand sometimes becomes a hinderance in the progress of analysis in such groups. Part of this problem is due to the fact that people's movements and hence the political culture in such anti-establishment groups has not advanced enough. But part of the problem is also due to the fact that the perspective of the Left activists working in such groups is limited to a purely anti-imperialist standpoint, (understood in a narrow sense). That is why even among Left-journalist, analyses about the drug industry from a comprehensive standpoint are a rarity; most of the writings being from purely anti-MNC viewpoint.

The editorial perspective in RJH is meant to delineate various issues (in a somewhat comprehensive fashion) germane to the theme chosen for the current number of RJH and to make editorial comments on some of them. In the foregoing, I have merged this two-step operation into a single step by making a summary-statement of a certain viewpoint on the three types of major issues which were thought to be central to the theme of this current issues of RJH. There are, of course, viewpoints different from the one outlined above. It is hoped that there will be further discussion and debate on these issues. Obviously, in this number of RJH it has been possible to cover only some of the issues.

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Impact of Patent System in India on Indigenous Drug Firms

sudip chaudhuri

A demand is often made by certain quarters to modify the Patents Act of 1970 to make its provisions less restrictive for the patentees. This paper examines the experience under the Patent and Designs Act of 1911 to argue that such a change will go against indigenous efforts to develop processes and manufacture drugs.

THE objective of this article is to briefly relate the experience of the indigenous drug firms with the Patents and Designs Act, 1911 in the context of the Patent Act, 1970 which replaced the former in 1972.

The Patent and Designs Act, 1911 did not categorically state what was patentable.[1] The interpretation followed by the Patent Office was that any new process for manufacturing a drug (whether old or new) was patentable. A new drug was also patentable provided the process of manufacture was described in the patent. The process, however, in such a case was not required to be new.[2] Under the Act of 1911, the indigenous firms have been legally prevented from manufacturing most of the new drugs introduced by the transnational corporations, during the life of the patent secured by the latter, i e, for 16 years, which could be extended to a maximum of another 10 years if the working of the patent had not hitherto been sufficiently remunerative to the patentee.[3] This had been possible because, as N R Ayyangar who was appointed by the Government of India to examine the patent law in India observed, the patentee, while patenting a new drug, could describe all the known and possible porcesses.[4] Actually the TNCs did so, as the experience of the indigenous firms suggests.[5] Even an old process, so specified by the TNCs, could not be used by the indigenous firms for at least 16 years. The latter were also forbidden from processing a patented drug into formulations or importing it.

The TNCs asserted their patent rights to proceed legally against firms which tried to manufacture or import the patented drug. Thus, Hindusthan Antibiotics Ltd (HAL), a public sector firm, e g, claimed that it has developed an indigenous process for manufacturing oxytetracyline Hcl. A plant, in fact, was set up and production began in 1961 without any external technical help. In the same year a TNC, viz, Pfizer too started manufacturing the same drug. HAL had to suspend production as Pfizer took legal action alleging infringement of patent rights.[6] A TNC was importing a drug at Rs 8 per 20 tablets. It sued an indigenous firm, CIPLA, when the latter started importing it at Rs 2 per 40 tablets.[7] Chloramphenicol and metronidazole are among the other drugs for which the TNCs took legal action to prevent the indigenous firms from formulating.[8]

The manufacturing activities of the indigenous firms were restricted to the old drugs or those new drugs for which it could develop new processes of manufacture. We will now discuss two cases which will give an idea about how the TNCs could prevent or delay the use of these new processes, developed through indigenous efforts even when these were not specifically covered in the patents of the TNCs.

Haffkine Institute, a public sector firm, worked out a process for manufacturing tolbutamide from locally available raw materials. A patent was also obtained. Unichem Laboratories, an indigenous firm obtained a licence from it and started manufacturing from 1961. Hoechst, a TNC, however filed a suit claiming that tolbutamide had been manufactured by Unichem on the basis of one of the formulas as mentioned in the former's patent granted earlier in 1956. The judgement of the Bombay High Court delivered in 1968 went in favour of Hoechst.[9] What is important to note here is that Hoechst won the case despite the fact that its patent did not specifically mention Haffkine's process. What clinched the issue was that Hoechst's description was open-ended. One of the claims of Hoechst was, in the interpretation of the judge:

> "Wide enough to cover all methods of eliminating sulphur from thioureas (to manufacture Tolbutamide) whether desulphurisation is effected by means of Hydrogen peroxide (as specifically mentioned by Haffkine) or by the use of any other substance[10] (phrases within brackets ours).

Strange as it may appear, such widely worded claims were permissible under the Act of 1911.

The same patent was also sought to be used for preventing Bengal Chemical and Pharmaceutical Works (BCPW), an indigenous firm, from manufacturing another drug, chlorpropamide. BCPW developed a new process for manufacturing it and obtained a patent in 1959. But in 1961, BCPW received a letter from Hoechst, alleging that the former had infringed upon the latter's patent under which Pfizer had been given a licence to produce it. Denying the allegation, BCPW sought legal action when it continued to receive such threats. Hoechst and Pfizer, on their part, filed a suit in 1962 in the Calcutta High Court against BCPW.[11] This time the judgement went in favour of the indigenous firm. The judge concluded that BCPW's patent was an independent one, not in any way influenced by Hoechst's patent which, in fact, did not relate to manufacture of chlorpropamide at all!

The case is quite revealing so far as the development of indigenous technology and the role of patent legislation are concerned. Hoechst's patent did not refer to any specific drug. It was for the broad group of sulphonyl Ureas. Forty examples were given, but it was claimed that other compounds could be obtained easily from the general formula and chlorpropamide was one of them. Hoechst, however, failed to establish in the court that chlorpropamide could be or had been produced on the basis of the process described in their patent. Even an expert witness appearing for Hoechst admitted that the information disclosed in the patent was not enough to carry out the experiment. But Hoechst could not give specific directions as to how to proceed. One of the specifications, in fact, was found to be chemically incorrect.[12] Significantly, out of the 40 examples provided, none referred to chlorpropamide.

One of the objectives behind the patent laws is to induce the inventors to disclose the inventions (in return for the exclusive right of using the invention for a specified period) so that knowledge may be diffused to facilitate further technological progress. The above-mentioned case illustrates

how the TNCs used the Indian patent law existing then to suppress indigenous growth. It is not only that Hoechst's patent contained inadequate and misleading information which prevents and distorts the diffusion of knowledge. The patent was of a general type, supposed to cover a large and unspecified number of products/processes. Thus, other firms could be threatened with legal consequences even when their product was not at all connected with the patent. All the patent disputes are not fought out in a court of law. A mere threat may be enough deterrant in many cases. Significantly enough, in 1968, before the court hearing started, Hoechst approached BCPW to settle the dispute ouside the court, which however the latter refused.[13]

Compulsory licence: An indigenous firm intending to manufacture a drug is required to obtain a licence from the patentee concerned, if the process of manufacture to be used is covered by the patent. Under the Act of 1911, this was the requirement even if the process in question was well known (but even so had been mentioned in the patent as in the case of new drugs discussed above) or additional technical data were necessary to implement the process and these had been developed by, or obtained from, other sources. Obviously, a patentee may grant a licence voluntarily to anyone on mutually acceptable terms. Compulsory licence is a licence granted by the Controller of Patents (or by the patentee as directed by the Controller) or a non-patentee to use a patent on payment of royalties to the patentee. The Act of 1911 provided for the grant of compulsory licence in case of misuse or abuse of patent rights.[14]

The Patents Enquiry Committee reported in 1950 that the foreign patentees did misuse or abuse their rights, e g, by importing the patented product rather than manufacturing it here, fixing the prices at high levels, not allowing others to manufacture the product even when it was not itself engaged in manufacture.[15] But, as the Committee observed, the provisions regarding compulsory licences were "wholly inadequate to prevent misuse or abuse of patent rights, particularly by foreigners".[16] The Panel on Fine Chemicals, Drugs and Pharmaceuticals, appointed by the government also reported earlier in 1946 that not a single compulsory licence could be obtained because of the wording of the relevant provisions.[17] For example, under Section 22, a compulsory licence could be claimed if "the demand for a patented article is not being met to an adequate extent and on reasonable terms". As the Patents Enquiry Committee commented, the Section unnecessarily also demanded that it has to be proved that as a result any trade or industry had been 'unfairly prejudiced'. Obviously, in practice it appeared very difficult to establish such a link.[18]

The provisions regarding compulsory licence (Sections 22 and 23) were amended in 1950, following the recommendations made by the Patents Enquiry Committee in its interim report submitted in 1949.[19] In 1952, an entirely new Section (23 CC) dealing specifically with drugs (and food, insecticide, germicide, fungicide, surgical or curative devices) was added. Under this section, the Controller of Patents was empowered to grant a compulsory licence to any applicant at any time unless there are 'good reasons' for refusing. The foreign patentees, however, were still in a position to effectively prevent or delay the use of compulsory licence.

The Haffkine Institute, e g, applied for a complusory licence, but the foreign patentee offered to give the licence voluntarily on the basis of royalties to be fixed through negotiations. They demanded an absurdly high rate of royalty of 25 per cent. It took more than four years to reduce it to 10 per cent, which however was still higher than the limit of 5 per cent stipulated by the Reserve Bank of India. By that time the Haffkine Institute decided to abandon the scheme.[21] Again, another indigenous firm Neo Pharma Industries entered into a technical collaboration agreement with an Italian firm for the technology to manufacture chloramphenicol.

A licence was sought from Parke Davis, which held the relevant patent in India. But whereas the subsidiary company in India pointed out that the matter was beyond its jurisdiction, the parent company in the USA insisted that Neo Pharma should first discuss with the local company. It took more than two years to decide as to who would negotiate. At last when the negotiations started with the parent company, they did not formally refuse to grant a licence but simply sat over the proposal. Finally, when a compulsory licence was sought for and was granted, Parke Davis went to the court and obtained a stay order.[22]

In fact, going to the court is a simple device the foreign patentees could employ. Even if ultimately the judgement goes against the patentee, the applicant would normally be prevented from using the compulsory licence during the period of the court case. The longer the time taken to settle a case, the smaller will be the relative benefit to the applicant for compulsory licence, because in any case after the expiry of the patent (normally 16 years) anybody was free to use the patent. The hazards of obtaining a compulsory licence, which include legal battles, perhaps explain why so few applications for compulsory licence were made under Section 23 CC. Till 1972, i e, when a new Act came into force, there were only five applications for compulsory licence, made by Hindustan Antibiotics Ltd (in 1959), Alembic Chemical Works (1963), Dey's Medical Stores (Manufacturing) (1960), Raptakos Brett and Co (1957) and Neo Pharma Industries (1961).[23] The applications were ultimately withdrawn in the first two cases. Compulsory licence was refused by the Controller of Patents in the third case.[24] The controller granted compulsory licences in the last two cases.

Patent System under Act of 1970

An important feature of the new Act, 1970[25] is the special provisions regarding drugs and a few other products. The life of the drug (and food) patents has been reduced from at least 16 years in the previous Act to five years from the date of sealing.,[26] or seven years from the date of filing of complete specifications, whichever is shorter (sections 45 and 53), i e, for a maximum period of seven years. For other patents, the duration is 14 years. The new Act categorically states that drugs (and food and those manufactured by chemical processes) can now be patented only for a new method or process of manufacture, not for the products as such (section 5). Hence in contrast to the previous situation, the indigenous firms can manufacture new drugs by old processes without violating the Act. Obviously, as before it can continue to manufacture old drugs. Even in cases where new drugs cannot be manufactured by known processes, and so a new process is required, the indigenous firms are expected

to face less restrictions in developing such new processes. This is because the firm discovering/inventing a drug can no longer patent all the processes known to it even if these are new. For a particular drug, only one method or process—the best known to the applicant—can be patented (Sections 5 and 10).[27]

Under Section 87 of the Patents Act, 1970, every patent relating to processes for manufacturing drugs (or food or chemical substances) has to be endorsed with the words "Licences of right" after three years of the date of sealing. This implies that anyone is automatically entitled to a licence from the patentee for using the patent on payment of royalties, the maximum rate being fixed at four per cent of the ex-factory sales (Section 88). Even before expiry of three years from the date of sealing, the controller is empowered to grant a compulsory licence (and fix the rate of royalties) if "it is necessary or expedient in the public interest" (Section 97). There is also a special provision in the Act of 1970 regarding the use of patents by the government. Any time, a patent may be used for official purposes, including those of public undertakings. The maximum royalty payable for such a use, in case of drugs (and food) has been fixed at 4 per cent of the ex-factory sales (Sections 99 and 100).

It must be pointed out, however, that the actual use of a patent by a non-patentee still remains hazardous. For example, under Section 87, as mentioned above, while the right to obtain a licence automatically accrues after three years from the date of sealing of a patent, it cannot actually be used till the royalties are fixed either mutually or at the intervention of the controller. As before, the patentees can continue to prevent or delay the use of their patents by others by refusing to negotiate and then proceeding to the court in case of any intervening action by the controller. This has, in fact, happened in the case of each of the applications made to the controller till now by three firms for fixation of royalties. Incidentally, all these cases relate to products other than drugs. In the case of the application made in March 1976 by Catalyst and Chemical India (West Asia), the controller fixed the rate of royalty tentatively as per Section 88(4). The patentee (ICI), however, went to the court and by the time the case came up for final hearing (July 1977) the patent was about to expire (in August 1977). In the remaining two cases, as the patentees approached the court, interim injunction was granted and the Patent Office was directed not to proceed with the applications of Titanium Equipment and Anode Manufacturing Co and Coromandel Indag Products made in September 1980 and July 1981 respectively. The two patents in which Titanium was interested expired in February 1983 while the court case was still pending. Regarding Coromandel, too, while the case is yet to be settled, one of the patents has already expired in March 1982, while the other is due to expire in February 1986.[28]

Despite such hazards, the Patents Act, 1970 appears, on the whole, to be an improvement from the point of view of the development of indigenous science and technology, compared to the previous situation. A demand is often made by certain quarters to modify the present Act and make the provisions less restrictive for the patentees. If the experience under the Act of 1911 is any guide, then such a change will go against the indigenous efforts to develop processes and manufacturing drugs.

Notes

[This paper was written in 1984 and hence does not contain any references to later events.]

1. *Report of the Patents Enquiry Committee (1948-50)* (Delhi, GOI, Ministry of Industry and Supply, 1950), p 64; N Rajagopala Ayyangar, *Report on the Revision of the Patents Law* (Delhi, GOI, 1959), p 20.
2. Ayyangar, *Report*, pp 20, 34, 36.
3. See Section 14 and 15, "The Indian Patent and Designs Act 1911", reproduced in *Patent Office Hand Book* (Delhi, GOI, 13th ed, 1966).
4. Ayyangar, *Report*, pp 34, 36.
5. See the evidence of K A Hamied of Chemical, Industrial and Pharmaceutical Laboratories (CIPLA), *Joint Committee on the Patents Bill, 1965: Evidence* (New Delhi, Lok Sabha Secretariat, 1966), Vol 1, p 154 and of S G Somani of All India Manufacturers Association, *Joint Committee on the Patents Bill, 1967: Evidence* (New Delhi, Lok Sabha Secretariat, 1969), Vol 1, p 294.
6. *HAL, Annual Report, 1961.*
7. Evidence of K A Hamied of CIPLA, *Joint Committee on the Patents Bill, 1965: Evidence,* Vol 1, pp 149-50.
8. *Report of the Committee on Drugs and Pharmaceutical Industry* (Hathi Committee) (New Delhi, GOI, Ministry of Petroleum and Chemicals, 1975), p 92.
9. For the text of the judgement, which also provides the background of the case, see, *The All India Reporter* (Nagpur, AIR Ltd, 1969), Bombay Section, Vol 56, pp 258-73.
10. Ibid p 264.
11. Information on this Patent case has been obtained from the judgement of the Calcutta High Court (Suit No 1124 of 1962); the plaint; the written Statement submitted by BCPW (all available at the Calcutta High Court) and the BCPW Assistant Secretary's Note placed at the BCPW Board of Directors meeting held on 27 July, 1970.
12. Hoechst's patent mentions alkalation with primary amides which is chemically impossible. See Ibid.
13. Minutes of the meeting of the directors of BCPW, Calcutta, 5 December, 1968.
14. *Report of the Patents Enquiry Committee (1948-50)*, p 71.
15. Ibid, p 162.
16. Ibid, p 172.
17. *Report of the Panel on Fine Chemicals, Drugs and Pharmaceuticals* (New Delhi, GOI, Department of Industries and Supplies, 1947), p 15.
18. *Report of the Patents Enquiry Committee (1948-50)*, p 168.
19. Ayyangar, *Report*, p 1.
20. *Patent Office Hand Book*, p 32.
21. Evidence of C V Deliwala of the Haffkine Institute, *Joint Committee on the Patents Bill, 1967: Evidence*, Vol 1, pp 451-52.
22. Evidence of N L I Mathias and A C Mitra of Neo Pharma Industries, *Joint Committee on the Patents Bill, 1965: Evidence*, Vol II, pp 487-88, 493-94.
23. Information obtained from the Patent Office, Calcutta. Apparently, the application by the Haffkine Institute, referred to earlier in the text, was made before Section 23 CC was added in 1952.
24. According to Rule 32B (inserted in 1953) of the Indian Patent and Design Rules, 1933, the Controller shall refuse the application, if "the Controller is not satisfied that a *prima facie* case has been made out for the making of an Order" (*Patent Office Hand Book*, pp 71-72).
25. For the provisions, see *The Patents Act, 1970* (New Delhi, GOI, Ministry of Law, Justice and Company Affairs, 1973).
26. A patent is sealed after it is granted.
27. For a discussion of the important provisions regarding drugs in the Act of 1970 vis-a-vis the Act of 1911, see S K Borkar, "Patent Act, 1970 and Its Effect on Drug Industry in the Country", in *Annual Publication* (Bombay, Indian Drug Manufacturers Association, 1974).
28. "Applications Filed for Licences of Right under Section 88(2) and 88(4) of the Patents Act, 1970", in *Journal of Patent Office Technical Society*, Vol 16, 1982, pp 80-81.

Responsibility of Industry, Doctors and Government

amitava guha

The proliferation of irrational and dangerous drugs in India has generated a well-informed and dynamic drug consumer's movement. Of the several issues that it has taken up the issue of banning high dose oestrogen progesterone drugs illustrates best its capability. On the other hand, the issue has also revealed inefficiency of the drug control authorities, their inability to implement the rules in the book designed to protect the consumer.

This inefficiency on the part of government institutions is compounded by their close collusion with the drug inaustry. The medical profession has also played a crucial role in opposing the ban of these drugs. The article highlights the unethical practices and actions of the different sections who have been involved in pressing for the continued marketing of high dose EP drugs.

IN 1982, the Indian Council of Medical Research recommended:

> "Fixed dose combination of oestrogens and progesterone may be totally banned in the country, even for the treatment of secondary amenorrhoea as other substitute are available in the market for management of secondary amenorrhoea"

Based on this recommendation, the ministry of health and family welfare banned HDEP in June 1982. Today five and half years after, the drug is freely available in India! The industry, medical profession, courts of law even the government departments played their role in undoing the govt's ban order.

For the first time in India the question of banning of a drug is being discussed and debated; consequently it has exposed the low level of ethics followed by the people involved in the medico-technical establishment.

It must be pointed out that the issue of harmful effect of a drug and therefore, its banning had never been raised by the medical profession. Even the issue of harmful effect of 'thalidomide' was taken up by the journalists and the ripple created in the so-called 'lay press' raised a wave which not only washed away any effort to defend the crime made by Gruanthal (its manufacturer) but exposed the menace of the industry in collusion with certain famous opinion maker medical personnels. In India similarly nothing is being said or no action had been taken by the famous doctors or opinion makers against the horde of drugs banned in developed countries but freely and legally available in India. It is again the 'lay press' *Onlooker* which raised the issue through the write up—"Pregnancy Test Drugs can Detorm Babies—Ban them". The issue, thereafter was widely taken up by the press and excepting one or two write ups till date none of them had spoken against the ban of HDPE.

Role of Industry

Harmful effect of the drug on pregnant women was detected as back as 1967 for. Pioneering task in this area had been taken by Dr. Isabel Gal. She writes:

> "The unfavourable effect of synthetic sex hormones on animal reproduction was known long before the introduction of HPT products in 1958. Despite this the manufacturers recommended HPT products as a safe and reliable method of pregnancy diagnosis and gave assurance that it does not interfere with the physiological course of pregnancy"

Following the reports of adverse drug reaction with HDEP, Rousel in 1970, Schering in 1971 and Organon in 1970 did not refer to use of the drug for pregnancy test in UK. The government of India issued order that this drug should not be used for pregnancy testing and the order be printed on the labels of the drugs marketed. The drug was established in India as an abortificient. It was promoted widely for inducing abortion. Even after the said order issued by the government, the companies promoted the drug through marketing staff as an abortificient.

Immediately after the ban order was issed, Organon India Ltd., (now Infar) placed a writ petition in Calcutta High Court and was interested to see that the writ was not contested by the Drug Controller of India during its hearing. It happened exactly as desired by the company and the case was heard and injunction was passed exparte against the ban order. It is interesting to note that neither M/s. Organon nor M/s. Unichem and M/s. Nicholas contested the finding of ICMR on the potential hazard of the drug but simply challenged that the ban order was not issued in accordance with the provisions of law. It was submitted that Sec. 18 of Drugs and Cosmetics Act allows the state govts only to ban a drug after issuing official Gazette Notification. That too the Act only provides banning of misbranded, sub-standard or adulterated drugs. This was an eye opener for the legislators, who after much shouting from the consumers and by some Members of the Parliament amended the law later giving the same power to the Central Govt also. Even now the question remains that HDPE or any harmful drug, if banned, should be done according to which law?

The industry did a lot to utilise medical profession in their favour. In the submission to the Supreme Court and high courts, the company placed letters written by a number of general practitioners and gynaecologists stating that HDEP should not be banned. In reality this was again done with the help of the marketing staff who went to the doctors with the draft of such letters and requested them to write according to the draft, a letter on their own letterheads. Therefore, it was found that the letters are not only the matically similar but, so is the language and text of the letters. In some cases the marketing staff of the companies wrote the letters on the doctor's letter pad and asked the doctors to sign them. The text of these letters more or less read:

> "I support the order of the government in banning the use of high dose E. P. Drugs in pregnancy testing.
>
> The drug is highly needed for treating secondary amenorrhoea, dysfunctional uterine bleeding, endometriosis and dysmenorrhoea. I have used this drug for a long time and never seen any adverse effect. I recommend that this drug should not be banned".

The industry made another attempt to mislead the courts on the information regarding the status of the drugs in different countries. Organon (I) Ltd stated that

> "It's not a fact that many countries have banned these preparations. These preparations are available in countries like UK, West Germany, France, most of the Western European countries and many South West Asian and African countries" (Infar, 1987).

One can easily find out how far this is a fact. Table 1 will clarify the position (UN List, 1986).

Infar (I) Ltd had no reply when asked at the public hearing why HDEP was not allowed to be marketed in their

parent country, Netherlands. Similarly, the company could not say why the drug was not allowed to be introduced in many other developed countries. The company's honesty was again questioned when Hermann Schulte-Sasse of the Institute for Clinical Pharmacology, Hamburg confirmed that.

"Two German pharmaceuticals marketed such drugs in Germany but withdrew them at the end of 1979".

Was the company confident that Indian consumers did not have any access to information from 'civilised European countries'? In fact Dr N N Roy Chowdhury, the president of Federation of Obstetrics and Gynaecological Societies of India (FOGSI) wrote to DCI to the same tune of Infar Co that the drug was available in most of the developed countries. He had also submitted a list although he did not care to mention any reference. From this list it appears that 'Shering' (he does not know that the real name of the company is Schering Aktiengesellschaft) market HDEP in West Germany, UK, Turkey, Japan, Argentina, Mexico, Belgium, Denmark, Australia. The drug is not enlisted in the 'Red List' (Rote Liste) 1984, 1985, 1986, 1987, a list of drugs approved by the government of FRG. Corroborative statement from Schering issued by Dr H Richter informs that only one brand of HDEP was marketed by them in third world countries that two had been withdrawn from October, 1986.

In the absence of any system of dissemination of unbiased information to the medical profession, the industry takes the fullest advantage to misinform the profession to mislead them with the help of their own tailored and distorted facts. As regards high dose EP drugs, the industry had taken the fullest advantage of this situation. The Voluntary Code of Marketing Practices adopted by International Federation of Pharmaceutical Manufacturers Association (IFPMA) suggests that

> "Scientific and technical information shall fully disclose the properties of pharmaceutical products as approved in the country in question based on current scientific information...
>
> "Information on Pharmaceutical Products should be accurate, fair and objective, and presented in such a way as to confirm not only to legal requirements but also to ethical standards and standard of good taste." (IFPMA)

Classical example can be sited from the promotional literatures of Infar(I) Ltd as to how they have violated all such codes of ethics. Even the Guidelines of Introduction of New Drugs by Government of India say that "the product monograph should comprise the full prescribing information necessary to enable a physician to use the drug properly. It should include description, actions, indications, dosage, precautions, warnings, and adverse reactions."

A product monograph of Orgalutin, a high dose of EP used to promote the drug to the doctors is captioned as 'A Woman's Strength Is a Woman's Weakness'.

Table 1: Status of EP Drugs Worldwide

Countries	Status	Year
1. Norway	Withdrawn	1970
2. Sweden	Banned	1970
3. Finland	Banned	1971
4. Federal Republic of Germany	Withdrawn	1979
5. USA	Banned	1975
6. UK	Withdrawn	1977
7. Australia	Withdrawn	1978
8. Austria	Withdrawn	1978
9. Belgium	Withdrawn	1978
10. Italy	Withdrawn	1978
11. Greece	Withdrawn	1980
12. New Zealand	Withdrawn	
13. Denmark	Banned	1974
14. Bangladesh	Banned	1982
15. Venezuela	Banned	1975

On page three of the monograph to emphasise that the drug is 'safe for the patients' the following lines are mentioned quoting a write up of two doctors Dr Choudhury and Dr Mitra that with the use of the drug there was—

> "No alteration in blood pressure.
> No alteration in blood-sugar level.
> No hepato-toxic effect observed".

The said monograph had given indications of composition and dosage only but nothing was mentioned about precautions, warnings and adverse reactions.

If the warnings and precautions circulated by the company a few years back are consulted, one can find the following facts in the Therapeutic Index of the company and judge how safe the product could be,

> "Since such preparations may cause an increase in blood pressure in predisposed women, this should be checked regularly. In case of serious hypertension the use of the preparation should be stopped immediately."
> "Since the glucose tolerance may diminish during the use of oestrogen/progestogen preparation, diabetic patients should be kept under strict control."
> "Hepatic adenomas have been reported in women on oestrogen-progestogen combinations."

This gives us an opportunity to question the standard of ethics maintained by the company and of the two doctors who had shamelessly concealed the facts.

It is also interesting to note that the manufacturers of HDEP were really frightened of the ban order issued by the governments. In the Therapeutic Index printed by Infar(I) Ltd at the time the ban order was issued, the company deleted all HDEP drugs namely, Menstrogen, Menstrogen Forte and Orgalutin. But their effort to promote the drug in the market remained unhindered. The company has never forgotten to mention these drugs in their price list!

Role of Statutes

Important statute applicable to import, manufacturing, etc of any drug is the Drugs and Cosmetics Act, 1940 and the Drugs and Cosmetics Rules, 1945. This is not only ancient but highly inadequate also. Although it is a central statute but it has given authority to the State Drug Controllers for approval of a drug for registration and sale. Because of such inadequacy of law, the Central Drug Standard Control Organisation has prepared 'Guidelines on Introduction of New Drugs'. We shall see how even the scanty restrictions under the said Acts and Guidelines have been violated by the industry.

Organon (India) Ltd, now Infar (India) Ltd had introduced the HDEP about 20 years before. Earlier, these hormones had been marketed separately as single ingredients or in combination as oral contraceptives. The drug was imported and the definition of a 'New Drug' under Rule 30A of the Drugs and Cosmetics Rules (DCR) says:

> "The importer of a new drug when applying for permission shall produce before the licensiong authority all documentary and other evidences, relating to its standards of quality, purity and strength and such other information as may be required by the licensing authority including the results of therapeutic trials carried out with it." (Drugs and Cosmetics Rules)

At the time of introduction of the drug it could be defined as a Fixed Dose Combination (FDC) of the third group according to the Guidelines on Introduction of New Drugs. This Guideline requires:

> "(c) the third group of FDC includes those which are already marketed, but in which it is proposed either to change the ratio of active ingredients or to make a new therapeutic claim.
> For such FDC, the appropriate rationale should be submitted to obtain a permission for clinical trials and reports of trial should be

submitted to obtain marketing permission."

The clinical trials required to be carried out in India before a new FDC is approved for marketing depend on the status of the drug in other countries. If the drug is approved/ marketed, phase III trial is usually required to be conducted in India. If it is not approved/marketed, trials are generally allowed to be initiated at one phase earlier to the phase of trials made in other countries.

On going through the records one can easily find out that the company never obtained any permission to initiate clinical trials in India as required by Drugs & Cosmetics Rules (through form 11 and form 12) for a test licence. No protocols for any trials were ever submitted by the company—this is required according to the Guidelines for Introduction of New Drugs. No case report forms were ever submitted.

As required in the Appendix III of the said guidelines the following reports on the studies are to be submitted by the company. (1) Human/clinical pharmacology (2) Exploratory Trials. (3) Confirmatory Trials. This was never done. Neither the company nor the Director of Drugs Control, Government of West Bengal, who allowed the company to sell the drugs in India can produce the following records relating to trials supposed to have been conducted by the company and approved by the government authority.

Title of the Trial

Name of Investigator and Institution

Objective of Tribals

Design of Study: open, single-blind, or double blind, non-comparative or comparative, parallel group or cross over.

Number of patients, with criteria for selection and exclusion, whether written informed consent was taken.

Treatments given: drugs and dosage forms, dosage regiments method of allocation of patients to the treatment;

Observations made before, during, and at the end of treatment, for efficacy and safety, with methods used.

Results: exclusions and dropouts, if any, with reasons, description of patients, with initial comparability of groups where appropriate, clinical and laboratory observations on efficacy and safety, adverse drug reactions.

Discussion of results: relevance to objectives, correlation with other report/data, if any guideance for further study if necessary.

Summary and conclusions.

In order to maintain a minimum standard of ethics, trials should be conducted with any drugs prior to their introduction in the country. For the purpos, 'licence for examination, test or analysis' has to be procured under Rule 21(c) which was never done by Infar in this case. While applying for manufacture of 'New Drugs' as per Rule 75-B of the DCR one needs to supply "informations as may be required including the results of therapeutic trials carried out with it" (sub sec ii). This was never done either by the manufacturers of HDEP.

It is striking to note that a controversial drug was introduced in our country at the time when enough controversy was raised elsewhere. The manufacturers never cared to conduct any trials in India. They were not only given licence to manufacture such a drug but it was periodically renewed by the drug control authority.

The guidelines for the introduction of new drugs per sec 9.2 under the title 'Regulatory status in other countries' state. "It is important to state if any restriction have been placed on the use of the drug in any other country, e g, dosage limits, exclusion of certain age groups, warning about adverse drug reaction".

This was not done at any time—either at the time of introduction of the drug nor any time thereafter by Infar. On the contrary, as discussed before, the manufacturers have attempted to misguide authorities with false information that the drug is in use in many developed countries.

The guidelines also require (sec 9.3) a 'Free sale Certificate from the Country of Origin'. It would be almost impossible for Infar to submit such a 'free sale certificate' as it was never allowed to be manufactured and marketed in Netherlands, their country of origin.

Not only question of ethics but the failure of the regulatory authorities and the lacuna in the laws are exposed when we consider that the manufacturers have not cared to submit to the minimum requirements of law and the government guidelines and have developed a large market of Rs 6.18 crore yearly.

Role of Doctors and Professional Bodies

A famous gyaenocologist C S Dawn has written in his widely used text book.

> Secondary amenorrhoea has had spontaneous cure rate in more than 50% cases where any treatment becomes empirical. New therapies of pituitary gonadotropin, clomiphene and bromocryptine showed promising results in the treatment of selected cases where these are indicated. Longer the secondary amaneorrhoea persists poorer becomes the prognosis.

He, as a professor, never vouched for the use of HDEP in secondary amenorrhoea in the classrooms and thus hid his other face. For, as a member of the Federation of Obstetrics and Gynaecological Societies of India (FOGSI) he says exactly the opposite. He attended the public hearings held at Madras, Delhi and Calcutta just to say that as an eminent teacher and famous gynaecologist he had never seen any adverse reaction with HDEP, and the drug was very much needed for treating secondary ameneorrhoea.

His notoriety had not stopped here. After the Delhi public hearing, he had submitted a study report on May 10, 1987 of a purported trial as a chairman of the family welfare committee of FOGSI. The report was titled as 'Use of Common Drugs in Pregnancy—Indian Experience'. It is only two-page monograph but the dimension of the study is enormous as the first paragraph of this report says:

> "An all-India multicentric study was conducted during 1982 and 1983 by the Food, Drugs and Medicosurgical Committee of FOGSI by the author as the chairman of the committee. Fourteen teaching and rural centres participated in this study. Statistically controlled protocol was prepared in consultations with Department of Hygiene and Public Health, Calcutta. The protocol covers 78 factors".

No further methodology and materials used in the study was mentioned. The result was:

> "There were 245 congenitally malformed newborns in this study. The incidence of congenitally malformed newborns at various centres varied from 2 to 10 per 1000 births".

The report never mentioned directly as to *how many pregnant women were covered in the study.* If the average incidence of malformation of newborn babies are considered, according to the study, say five per 1000 and a total number of malformed newborn babies reportedly were 245 then we arrive at the fact that in order to get such result, the trial covered 49,000 pregnant women. That such a phenomenally high number of patients were covered in only one year from "14 teaching and rural centres" is noteworthy as this type of trial is impossible even in developed countries.

In the Calcutta public hearing Dr. Dawn was asked that in order to prove that his trial was not fake, he should submit papers relating to the ten protocols as required by the government. Dawn is yet to prove that it is not fake. Obviously the sole objective of producing such a report, which has never been published in any professional journal was to prove that no congenital malformation could be found with the use of hormonal drugs during pregnancy. When the government had banned the use of HDEP during pregnancy and the manufacturers have accepted it, the eminent doctors like Dawn, C L Jhaveri, P K Khan, Sharma are all rejecting it.

Dr. Sharma of Delhi and Khan of Calcutta had without any hesitation said at the public hearings that they would continue to use HDEP for pregnancy testing. We are yet to see the Medical Council of India react to such violations by cancelling the registration of these doctors.

Dr. Jhaveri of Bombay, seniormost and famous gyaenocologist and many times president of FOGSI went even further that estoprogin (HDEP) drug came as a blessing. It had helped—in the second world war women who had been assaulted by the soldiers had used HDEP drugs to abort unwanted feluses! He stated in the Delhi and Bombay hearings that in his 40 years' of gynaecological practice he had used the drugs *for inducing abortion* and had not found a single case of malformation of babies. His statements were recorded by the Drug Controller of India during the public hearings.

One may conclude that Jhaveri had committed punishable offences in two cases. First, he had practiced MTP when it was not legalised. Second, that he had violated the government order in using the drug on pregnant women. We are yet to see that DCI take any action against Jhaveri. This septugenarian doctor was so loyal to the arguments put by the industry that he rushed to the dias at the Bombay hearing to assault one speaker who was dissecting a point of law placed by the industry.

A good number of famous gynaecologists have attend almost all the public hearings leaving their generally over crowded chambers and have said the same things repeatedly. They had not cared to place any pharmacological and clinical evidence in support of their statement that the drug is safe and necessary.

In the Delhi and Calcutta hearing N N Roy Chowdhury, president of FOGSI stated that the Federation had unanimously adopted a resolution that the government should not ban HDEP as they were safe and needed to treat secondary amenorrhoea, dysfunctional uterine bleeding, endometriosis, menopausal symptoms, etc. and there was no substitute for this drug. This statement was challenged by a professor of gynaecology at Calcutta who as a member of FOGSI wanted to know where and when such 'unanimous' resolution was taken. He also produced a statement by Dr J Mitra, Honorary Joint Secretary of FOGSI which states

> "I am of opinion that high dose combination of oestrogen-progesterone should not be used during pregnancy.
>
> I also feel that it is not essential to use this high dose combination for treating gynaecological condition like dysfunctional uterine bleeding, menopausal syndrome, etc. These combinations should not be used indiscriminately as there are potential hazards."

Roy Chowdhury could not provide any proof to substantiate his statement which was openly challenged.

Another instance of violation of minimum standards of ethics can be cited with reference to the activities of P K Banerjee, Honorary Treasurer of the Indian Medical Association. There are complaints by his professional colleagues that he is an obedient supporter of Infar (India) and defended the company's interest in using anabolic sterioid for promoting growth in children. Banerjee wrote a letter to DCI dated April 6, 1987 in the capacity of honorary treasurer, IMA stating that the drug is much needed and harmless. On inquiry, it was found that he had misused the good name of the IMA. As the President of IMA stated that

> I would like to mention that the letter issued by Dr Banerjee is his own view and he is not authorised to communicate the views of IMA. It is unfortunate that he has used IMA stationary for expressing his personal views".

It is necessary to mention here the role of the two doctors who were involved with banning the drug—P Das Gupta, Deputy Drug Controller and P K Dutta of World Health Organisation. The Deputy DCI had no scruples about favouring the industry openly. He tried to dilute the issue.

The Supreme Court had clearly asked the DCI to conduct public hearings on banning of high dose combinations of E P drugs. The Deputy DCI, at the Calcutta hearing, attempted quite something else. He stated that the question of banning HDEP should not be taken as an ego fight. Although the Drugs Controller's office had once banned it, it did not mean that they should stick to such decision for- ever. He also appealed to the gynaecologists that they should come forward and suggest a 'cut off' dose for estrogen-progestogen combinations. He wanted to confuse the issue on the question of high dose and low dose EP. He wrote letters without the knowledge of DCI to FOGSI and Indian Associations of Fertility and Sterility asking them to give their views on a questionnaire on estrogen progestogen combinations, dated March 23, 1987. He carefully dropped words 'high dose' in the questionnaire. The questions are tailored in the following way which is suggestive of the desired answers.

> 1. Whether fixed dose oestrogen and progestogen is necessary i. the management of secondary amenorrhoea?
>
> 2. What are the possible side effects of fixed dose oestrogen and progestogen combination?
>
> 3. Do you feel that with a suitable cautionary label the use of fixed dose of oestrogen and progestogen combination in pregnancy be prevented?
>
> 4. Whether fixed dose oestrogen and progestogen combinations are marketed in other countries?
>
> 5. Whether fixed dose oestrogen and progestogen drugs should be banned?
>
> 6. Do you have any other suggestions on this issue?"

Nowhere in the above questionnaire had Das Gupta mentioned '*high dose* estrogen and progestogen'. It can be noted that oral contraceptives are also fixed dose oestrogen and progestogen combination. The president of these two organisations C L Jhaveri and N N Roy Chowdhury made full use of such questionnaires and pumped the arguments of the industry in their reply which was considered by Das Gupta as an important document at the public hearing held at Bombay where Prem K Gupta, DCI who was absent at the Calcutta public hearing said that this was done without his knowledge and offered an apology for the action of the Deputy DCI.

At the Calcutta hearing Das Gupta was openly supporting the manufacturers of HDEP. He, along with Dr P K Dutta helped the management of Infar to create a stir at the public hearing and cancelled the hearing with a plea that they may be physically assaulted when there was no valid reasons to do so.

It is necessary to mention the role of other doctors and professional organisations. The reactions of famous gynaecologists and pharmacologists of UK on the need of HDEP were different. Some of these doctors are members of the Committee on Safety of Medicines. Some of the responses are as follows;

> 1. "I feel strongly that there is *no justification* for the use of these drugs in amenorrhoea, menstrual irregularities and other "gynaecological disorders". Amenorrhoea and menstrual irregularities require investigation and specific causes identified and, if necessary, treated. If menstrual regulation is required in patients who have no periods and who have irregular (and perhaps heavy and painful) period then the treatment of choice is either the conventional *low dose* estrogen-progesterone oral contraceptive pill, or progestogen alone.
>
> I think it would be irresponsible and dangerous to encourage the use of high dose estrogen-progestogen combinations in management of these gynaecological symptoms". (Dr. Stephen Franks, Reproductive Endocrinology; St Mary's Medical School, London).
>
> 2. "I was alarmed and disturbed to learn that high dose combinations of oestrogen and progestogens are still marketed, and used in the Indian sub-continent. I understood that steps had been taken in 1983, to withdraw these products and I find it extraordinary that four

years later it is still possible to promote, prescribe and purchase such medicines.

They are associated with significant risks to the factus, if administered during pregnancy. The Committee on Safety of Medicines (of which I am a member) issued warnings to all doctors about these hazards in 1975 and 1977. The British Medical Journal drew attention to the problem in an editorial in 1974. As a result of these publications, and of professional opinion, pharmaceutical companies in the UK voluntarily withdrew their products containing high dose oestrogen and progestogen from the market.' (M D Rawlins, Professar of Pharmacology, University of Newcastle upon Tyne).

3. "I find that I am in complete agreement with the opinions expressed by Dr Steven Franks and Professor Rawlins and I have no reason to change my own views, as expressed therein. Perhaps the only thing I could add is that now, with four years experience as a member of the United Kingdom's Committee on Safety of Medicines, I'd like to emphasise Professor Rawlin's point—that is, that these drugs would be unacceptable in the United Kingdom, that our attitude is that the obligation is on the pharmaceutical company to prove quality, safety and efficacy of preparation and not on the drug regulatory agency to prove the converse and that, while those drugs are certainly not banned in the United Kingdom, were any attempt to be made to introduce them I have very little doubt they would fail to secure a licence". (Dr H S Jacobs, professor of Reproductive Endocrinology, The Middlesex Hospital Medical School and University College, London).

The Public Hearings

Thus, famous professors of the medical institutions did not hide their surprise and disgust at the use of the drug and role of government regulatory authority, nor did a large number of the specialists in Calcutta and Bombay hearing. The DCI initially decided to close the public hearing after Delhi. About 150 doctors including professors of gynaecology and pharmacology wrote to the DCI to hold the hearing at Calcutta as well. Initially there was no respond from the DCI. This gave raise to such a reaction that at the instance of the Association of Health Service Doctors, West Bengal about 200 doctors assembled in a convention condemned the activities of the DCI and resolved to start a campaign against the drug manufacturer and the government of India for not banning the hazardous drugs. This compelled the DCI to announce public hearings at Calcutta and Bombay four months after the Delhi hearing.

During the Calcutta hearing, a large mass action for banning the drug took place. For the first time the trade unions, doctors, consumers and health activists demonstrated before a drug company and condemned them for production of banned drugs. It was encouraging to see that for the first time, famous doctors who had been vouching for the industry were challenged by other well-known professors, gynaecologists, pharmacologists.

At the Bombay hearing it was also quite amazing to see that when Jhaveri said, that he would give an award to anyone who could place any evidence of foetal malformation by HDEP, it was accepted by other group of doctors. The real drama took place at the Bombay public hearing when this group of doctors placed a little girl and her mother as evidence of the foetal abnormality and placed a letter which had congratulated them for their effort to detect such drug induced malformation of the baby. The author of the letter was none other than Dr. Jhaveri himself.

Role of People

Long back, after the publication of the write up in *Onlooker*, certain health activists tried to take up the issue but it could not spread. Even when the issue reached the Supreme Court, Vincent Panikulangara a lawyer from Kerala had to fight for a ban quite alone.

In Madras, Delhi and Calcutta hearing some people appeared as 'consumer activists'. Their expressed concern was more on 'illegal' and 'unjust' blames being attributed to the industry than on the harm to consumers. They forgot that this hearing was most important because for the first time merits and demerits of a drug were being publicly heard. They also forgot that their counterparts in developed countries have forced the companies to obey a minimum code of conduct and Infar was admonished by the International Federation of Pharmaceutical Manufacturers Association for violation of its voluntary code however biased, weak and ineffective that may be.

It has also true that the trade unions had palyed different role in different places. While at Madras and Delhi there was no scope for their intervention they responded remarkably positively at Calcutta. Unions of medical representatives, the Federation of Medical and Sales Representatives Associations of India (FMRAI) and the Organon(I) Ltd Workers Union organised a demonstration in front of the gate of the Infar factory. The workers attended it and the president of their union announced that if the company failed to convince them that the drug cannot cause any harm to the people they would refuse to produce it. The representatives of FMRAI appeared before the public hearing and narrated how they were being directed by their employers to misguide the medical profession with partially or totally false information. They also exposed how the Infar and Unichem had been entertaining and spending money for providing travelling expenses of a particular group of famous doctors who had been appearing before the public hearing on repeated occasions. They also stated that the drug was sold by the companies without any promotional effort. The companies are manufacturing the drug and through their distributioin channel it is reaching the outlets where it is automatically sold. The margin of profit in this drug is among the highest.

In contrast to this, the role of the Shiv Sena Union of Unichem at their Bombay factory not only favoured the industry but workers openly threatened the audience that if anyone spoke against their management, they would be forced to take drastic actions. There was a large number of Shiv Sena activists at the Bombay hearing who had been booing and shouting at the women's group whenever they expressed their concern which was often tinged with emotion. This shows the difference in level of consciousness among the workers of the two places.

There was remarkable response from womens groups. In 1979 some women's groups of northern and western India took up the issue. The issue of banning a drug cannot be solely seen in terms of exploitation of female by male. It is also not because Dr Isabel Gal was a women that she first explored the hazards of the drug. The question of banning a drug concerns the profit motive of industry and the low standards of ethics of some eminent opinion-makers of the medical profession in India. During the public hearings. Most of the women's groups identified the crux of the issue—that the existing condition in our country is conducive to industry-government clique. Some of them asked a pertinent question: Why had the court not first banned the drug in the interim which is said to be causing danger. Who would be held responsible for any damages which are being caused even now (if at all) the drug is officially banned in future? They have also declared that they would file litigations against any future malformation of newborns and would ask for compensations from the Drugs Controller and the industry. However the question remains that when there is dearth of ethics among all levels of the decision/opinion-making in the establishment can the judiciary remain un affected?

[While preparing this paper help had been sought from the excellent compilation of documents and different monographs prepared by Mira Shiva, Coordinator, All India Drug Action Network.]

The Socio-Political Dimension

imrana qadeer

The EP drugs issue has brought into focus the sickness not only of the legal system, but of the medical system as well. How is it that we are fighting a case which should not have arisen at all in a sane society? In reality the very need for pregnancy testing is rooted in the maladies in the social situation and the inadequacies of the health system. Thus the movement against EP drugs and other such technologies must be woven into the wider political movement against a system which breeds, and protects such oppressive developments.

THE addition of high dose oesterogen and progesterone combinations to the long list of oppressive technologies for women is not recent. These drugs have been freely sold in the market for some time now, even though scientifically speaking—their use is not indicated. Its use however, has created such havoc that the victims, that is some of the women, could not bear it any longer. Their protests led to the banning of the drug. The ICMR had already recommended its ban as a drug for pregnancy testing and the court passed a judgment banning its sale. These steps by the authorities were brought to naught by the companies which used the loopholes in the legal system. They obtained the right to continue their business not because they proved the drug safe but because they argued that the Drugs and Cosmetics Act had no provisions to ban a drug (however lethal it might be)! Their victory over the petitioners (women), the referral of the case to the Drug Controller of India and the public hearings in the major cities have revealed a lot more about the sicknesses of not only the legal system but also the medical system.

This compels one to ask, how is it that we are fighting a case which should not have been there at all in a sane society? How is it that while life saving drugs are scarce, dangerous drugs are so easily available over the counter? How is it that the majority of those who flaunt the Hippocratic oath as a mark of their superior professional ethics, preferred to stay out of the controversy when the health of their clients was being jeopardised? How is it that for the sake of so called scientific advancement and the doctors' right to chose treatment for their patients, needy people are treated as guinea pigs whose lives seem to be of very little value?

When we ask ourselves these questions, it is not difficult to see that the issue is not confined to EP drugs but relates to the very nature of technology which is being propagated today in the area of population control. To give it scientific neutrality this area of research is called 'reproductive biology' and constitutes a part of the larger field of 'biotechnologies', all meant to intervene in natural biological and not social processes. They do however, become tools in the hands of some and thereby influence the social process in a way desired by only those sections who are in control. One, therefore, has to ask a very basic question, do the majority really need these technologies? And if they do, what should be the limits of their use?

In this age of modernity and high technology, such questions might sound backward, even anti-technology, but they are neither. Let us ask ourselves why do we need pregnancy tests? The reasons are simple enough.

1. These couples/women for some reason either do not want to have a baby or on medical grounds need to know their status so that adequate care may be given to them as in the case of pregnancy in diabetic or heart patients or in case of high risk mothers with high probability of congenitally malformed or diseased foetus.

2. Apart from these medical reason yet another reason for pregnancy testing is to make a timely choice for abortion if the sex of the baby is undesirable.

If the right of a women to avoid a pregnancy is accepted, then, why is it that despite years of research, in reproductive biology and contraceptive technology, despite millions of dollars that have gone into this research, we still do not have a contraceptive which is safe for the user, sure and cheap? The researchers have in fact sacrificed safety for surety and costs have never really mattered. A good example, is the use of NET-EN despite adequate evidence of its dangers, and the free distribution of oral pills despite their exhorbitant prices. Oral pills were accepted by the planners of the National Family Planning Programme for use in pilot projects for the benefit of rural women and Net-En was approved for marketing in India. All this because the focus had all through been, not on discovering or inventing safe technologics but on pushing those which fulfilled certain targets. Similarly, if we were serious about providing contraceptive or abortion services to women, these should have been an integral part of the most basic health services. This however, is not the case. Despite all the glib talk about health for all by 2000 AD and about full coverage of populations with minimum health services (Primary Health Care), the majority, specially the poor, still have no access to health services (GOI, 1983). People are much more familiar with targets, force, paycuts and withholding of increments for not getting 'cases' rather than with choices in family planning methods. They don't seem to know that the countrv's health services were in fact meant to provide these choices to them and all that goes along with making such a choice.

Yet another related issue is that a large number of women cannot avail even such services as are available, even if they want to. This is primarily because of the pressures exerted by the family and their own insecurity within that structure. Despite voluminous reports on the status of women, national celebrations of the international womens' year and huge amounts of money going down the drain into the so-called women's upliftment schemes, the status of women remains at a level where the majority have little say in matters as intimate as their own selves.

The problem of women who need the test for medical reasons or for failure of contraception is not very different.

tion of their becoming a prey to the greedy private practitioner, or the ill informed doctor would not arise. There are any number of safe and equally cheap pregnancy tests that the health service ought to be providing to women who really need it (*EPW*, 1987).

It is not difficult to see then that the medical establishment is not interested in safety for the user but in surety of contraception. It is not concerned with making services accessible to people but wants to catch them as targets for surer methods like sterilisation. It is not bothered about the poverty or backwardness of the people but is geared to control them.

The second reason for using pregnancy tests was the need to be selective about the baby's sex. A couple detects pregnancy, goes for amniocentesis and then opts for abortion if it is a female foetus. In Maharashtra alone, between 1982 to 1986 the number of clinics performing amniocentesis has increased from 10 to about 600. The estimated numbers of abortions done for expelling female fetuses in 1985 has been 40,000 (GOI, 1986). This pattern, frighteningly prevalent in most parts of the country, is yet another reflection of a social malady. Instead of provoking its professional ethics and fighting the evil openly, the medical profession chooses to keep quiet or fights against restrictions over the use of amniocentesis, in the name of freedom of the medical practitioners to choose the best for their clients. The medical researcher on the other hand continues to add to the list of oppressive technologies, techniques such as those used for sex pre-selection which promotes the practice of discrimination against female foetuses. At the same time they also make the obstetrician the complete controller who now diagnoses as well as dispenses and thus acquires godly powers!

These questions lead us to the reality that the very need for pregnancy testing in the majority of the cases, largely arises out of maladies located in the social situation as well as the inefficiency and inadequacy of the health service system. Focussing on this need and not its causes, finding technologies for satisfying this need without touching its causes, can at best be called a symptomatic approach to tackling deeprooted problems. Such technologies in fact not only divert attention from the real nature of the problem but also provide cover for the system's wider failures. Accepting them and using them for controlling female fertility amounts to accepting an out-right neo-malthusian strategy for the problems of population.

EP Forte is not the only drug which falls under this group of reactionary technologies. When in 1984 women protested against amniocentesis the government had expressed much concern at the loss of female foetuses and the exploitation of women by "clandestine private practioners". In a seminar organised by the Additional Secretary and Commissioner of Family Welfare in December 1986 at Nirman Bhavan, the steps suggested to tackle the problem included (1) Legal reforms, specially in the Medical Termination of Pregnancy Act 1971, (2) Social awareness through educational programmes and upliftment of women (3) Restricted permission for doing amniocentesis to public institutions (4) More than one doctor's recommendation for such a test. The government's representatives were very sympathetic to these ideas but they argued that the legal system could not be changed. This was perhaps because the MTP Act provides for abortion in a cases where contraceptions has failed and there is no way in which this could be disproved. It is well known that MTP has become a technology in use for the family planning programme and it is no wonder that the government is not inclined towards making this explicit. At the same time it is impossible to introduce stringent measures within the legal system without making the conditions under which abortions take place more restricted and explicit. The government's reluctance to change the law is projected as the 'helplessness' of its legal system. It is ironical that a government which passed the Muslim Women's Bill despite all the opposition and social presures should plead helplessness and invoke 'social awareness' to put an end to the misuse of amniocentesis.

Yet another example is the wide range of technologies used in Family Planing Programme starting from IUD, tubectomy, oral contraceptives, abortions and laparoscopy. All of these were considered for family planning and within the programme, acceptance and desire for family planning were simply taken as issues of availability of technology. The programme for a long time refused to take into account the major socio-economic dimensions of family. This very narrow approach to the problems of population is obviously not an un-intended accident. The waxing and waning attraction towards compulsion at one time and incentives at another time is in itself an indication of the limited range of options within which given technologies are expected to be effective. It also reflects the direction and nature of the overall developmental policies.

The latest in the barrage of technology is the case of Indo-US Vaccination Action Programme (*EPW*, 1987, correspondence). In the health programmes for mothers and children as well as the general population, vaccines have been in use since independence. Despite the availability of these well known technologies, the diseases against which they are effective continue to kill and maim. The only exception is smallpox, a disease that continued for decades despite the use of vaccines in this country. Finally, when it was contained, it was not only because there was a vaccine, but because a better understanding of the epidemiology of smallpox developed over time and provided an alternative strategy.

Suddenly, however, the faith of a set of experts in vaccines has been revived and they have signed a collaborative scheme with the US. Will they now test better vaccines on the Indian population? Even if we believe the argument that only vaccines needed in India will be tested like the cholera vaccine (or rabies and pneumonia vaccines etc.), we have to answer a very basic set of question. Firstly, what is the use of giving effective cholera vaccine to a people who are to perish in drought, without food and drinking water? Even if cholera is to be fought, have we shown that it is possible with the use of vaccines alone, rather than together with the provision of drinking water, food rations and sanitation? Over and above all this, do we have an understanding of the dynamics of morbidity and mortality caused by these diseases and their load and extent to be able to predict costs, set priorities and do some kind of monitoring? With obvious contempt for even the rhetorics of 'scientific rationality' vaccine technology is being glorified. This is not because what it prevents is our priority health problem but because

there is a technology which creates the aura of action and concern for the suffering of people without really touching the cause of that suffering.

These examples illustrate that again and again the system clutches at technologies which promise relief from suffering without really changing some of the social constraints.

Therefore, in the case of EP Forte and its widespread usage, it would be wrong to blame the lack of continuing education on non-availability of information to doctors. These may be peripheral reasons, the main reason being the underlying ideological bias of the 'scientific rationality' which is taught, accepted and propagated within the medical establishment. It is because of this ideological regimentation (where all technology available must be accepted and used and ill health should be seen as a medical problem alone), that the medical profession at large has failed to stand up together and speak in the interest of its clients. A good number in the profession have in fact taken advantage of the trend to make their own profits in the shape of money, position and security. This has been possible because they have been backed by those interested in actively or passively propagating technologies like EP Forte. The drug companeis who use these doctors, also paralyse the legal system which invariably finds itself 'helpless and incapable' of banning killer drugs. The control machinery has become ineffective and is listening to the 'impressions and personal experiences' of the so called scientists (the senior medical practioners) rather than to the meticulously collected objective evidence presented by those who are demanding a ban on the use of EP Forte.

Where the inappropriate usage of EP Forte (and other medical technologies) can be traced to maladies at so many levels, then the issue is not of fighting against just one drug, one test or one technique. The issue is of weaving this protest into the wider political movement against a system that breeds, nurtures and protects oppressive technologies and ignores those technologies which could be better utilised in the interest of the people.

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Ethical Aspects of Development of Salk Vaccine

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This paper is an historical account of the discovery, testing, and early distribution of the Salk polio vaccine. The discovery posed fundamental dilemmas of medical research, pharmaceutical production and public health. This paper assesses the ethical problems which arose, and examines critically their resolution.

The great public demand which the discovery of the vaccine generated created a need for federal control which was only partly met. The federal government did not have sufficient institutional and legal mechanisms to assure the safety of the vaccine and protect the public. This discussion illustrates the failure of the government to keep pace with medical technology.

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THE introduction of a new biological pharmaceutical presents a host of medico ethical dilemmas. The debate surrounding the nationwide influenza vaccination programme suggests only a few of the multifarious difficulties involved. Each step in the process—from the initial funding for research to the testing, licensing, commercial production, and distribution of the drug—is wrought with serious judgmental considerations of both a medical and moral nature. If one accepts the public welfare as the preeminent value in the discovery and distribution of a new drug, the role of the government is of primary importance.

The history of the Salk polio vaccine is revealing in this regard. The discovery marks an important episode not only in the growth of immunology, but, most significantly, in the history of public health. The demands made upon the government and the government's response to these demands provide critical insights into the recent course of public health in America. This paper will examine the history of the Salk vaccine in light of the ethical judgments involved.[1]

The vaccine discovered by Salk in 1952 marked the culmination of the efforts of the National Foundation for Infantile Paralysis to secure an immunological agent against polio. The Foundation had grown out of efforts to raise funds for Franklin D. Roosevelt's Warm Springs retreat during the Depression. In consultation with public relations firms, Roosevelt's former law partner, Basil O'Connor, organised a series of "President's Birthday Balls" in 1934 with the slogan: "Dance so that others may walk" (3, p. 16). In 1937 Roosevelt announced the formation of the National Foundation for Infantile Paralysis (NFIP) for the purpose of ensuring "that every responsible research agency in this country is adequately financed to carry out investigations into the cause of infantile paralysis and the methods by which it may be prevented" (5). Basil O'Connor became the president of the new organisation. The creation of the Foundation signaled a major new direction in the history of American medical philanthropy. The appeal for funds now utilised sophisticated public relations techniques (6). Of significance was the dramatic extension of the traditional concept of philanthropy, as the National Foundation now sought funds from everyone, not just the affluent. Radio spots requested that dimes be sent directly to FDR in honor of his birthday on January 30, 1938. More than 2,600,000 dimes "marched" into the White House, inundating the mail room (3, p. 18). Thus was coined the title "March of Dimes."

The Foundation pioneered in the techniques of modern fund raising with its mass appeals, use of media, public relations, and a corps of volunteers. The unprecedented doorbell campaign—the "Mothers' March on Polio"—began in earnest; the Foundation put its cadres into the sheets. Their ability to raise funds, even during the most trying economic circumstances, must be rated remarkable. By the 1950s the National Foundation had developed the perfect form of philinthropy for the burgeoning consumer culture.[2] The concept of philanthropy as consummerism—with donors promised personal benefits—was to a great degree the contribution of the March of Dimes.

Why did poliomyelitis become the rallying point for millions of Americans? One logical answer is, of course, Franklin Roosevelt's personal battle with the disease. Despite FDR's attempts to conceal his infirmity, a new media age made polio the most prominent of diseases. But Roosevelt merely symbolised a more general perception that polio was a peculiarly American malady. More dangerous in affluent nations, polio became America's target although other diseases and medical afflictions were really more common.[3] An increasingly child-oriented society could not tolerate a disease which crippled its young.[4] In addition, the National Foundation had a remarkably powerful influence on the whole direction of American medical research and health care priorities, a topic that demands more attention than is possible here.

There can be little doubt that the Foundation put its funds into the right hands. Through the use of long-term, substantive grants awarded to eminent researchers and institutions, the NFIP insured the continuity of polio research. By 1948 a series of important epidemiological studies had been made under the Foundation's auspices. Most important was the discovery of Drs. John Enders, Thomas Weller, and Frederic Robbins, all of Harvard University, that poliovirus could be cultivated in nonnervous tissue (4, pp. 369-381; 9). This Nobel Prize-winning discovery virtually assured that a polio vaccine could be produced. A race, with bitter political and personal overtones, ensued.

Development of Salk Vaccine

Dr. Jonas Salk began his research on polio immunisation in 1951 under a grant from the National Foundation. Within a year he had successfully immunised monkeys in his laboratory at the University of Pittsburgh. Confident that he had found the key to immunisation in a killed virus vaccine, Salk proceeded to test his discovery on human subjects.

The first of these experiments was conducted on children from the D. T. Watson Home for Crippled Children. Risk was reduced by vaccinating these children, who had already had polio and were thus immune prior to injection. Salk inoculated 43 children with no adverse reactions. He later commented, "When you inoculate children with a polio vaccine, you don't sleep well for two or three months" (1, p. 139).

Salk continued his experiments at the Polk State School, where he again inoculated children with his test vaccine. Unlike the polio victims at the Watson Home, these children, who were mental defectives, had no history of polio and thus much lower antibody titer, significantly increasing the danger of the test. The ethical standards applied here, though in no way unusual in the 1950s, must be questioned. Dr. Tom Rivers, one of the most eminent virologists in the history of modern immunology, in reviewing an experiment similar to Salk's, voiced concern about the morality of such a test (10, pp. 466-467):

> I think that if someone wants to use adults as volunteers to try out a new drug or vaccine, that is perfectly all right, provided that the adult has been told about the nature of the disease he is exposing himself to, has been completely informed about the nature of the agent he is to receive, and has been told the chances for success or failure . . . An adult can do what he wants, but the same does not hold true for a mentally defective child. Many of these children did not have mommas or poppas, or if they did their mommas didn't give a damn about them.

Fortunately, Salk's confidence in the vaccine was borne out by the results of these initial human tests. But Dr. John R. Paul, in his definitive history of poliomyelitis, pointed out what failure may have entailed (4, p. 418):

> Had the experiments gone wrong at this point there might have been a tremendous outcry. Some would have called it unnecessarily hasty to use so many subjects all at once... And others would have called it a crime to subject helpless children and adults to this sort of experimentation.

It would seem from this analysis that an experiment on human subjects is ethical if successful, unethical if a failure—a dubious formulation. No government guidelines or requirements for human testing existed at that time.

Salk's success buoyed his faith in the vaccine. In presenting his findings to the medical community, he was, however, more cautious (11):

> Although the results obtained in these studies can be regarded as encouraging, they should not be interpreted to indicate that a practical vaccine is now at hand. . . .It will now be necessary to establish precisely the limits within which the effects here described can be reproduced with certainty.

The task of establishing the effectiveness and consistency of the new vaccine would not be Salk's alone.

Planning Field Trials

By the middle of 1953 the National Foundation had begun devising plans for a mass nationwide trial, the largest of its kind ever attempted. The Foundation established a Vaccine Advisory Committee (VAC) of eminent physicians and researchers headed by Tom Rivers to oversee the field trials. The NFIP's decision to conduct such a field trial meant that serious consideration of other forms of immunisation, particularly the attenuated vaccine, no longer was possible (4, pp. 423-425). The Foundation's position, though clearly understandable in light of the embryonic nature of attenuated vaccine research, sparked controversy and aroused bitterness. From this time onward, criticism of the [illegible] be an indeterminate mixture of scientific judgment and personal animosity.[5]

The National Foundation conducted affairs on a grand scale; the field trials slated for early 1945 were to be no exception. The NFIP with its newly created Vaccine Advisory Committee proceeded to design the trials in a direct, almost autocratic manner. After his initial discovery, Salk found his influence diminishing over subsequent decisions concerning testing, as did a host of other scientific advisers to the Foundation. Basil O'Connor, anxious to move forward with all possible speed within the bounds of safety, pushed the VAC in the singular direction of conducting a definitive test (10, pp. 495-500).

Scientific advisers dashed over the design of the trials. Originally, the Foundation planned to vaccinate volunteers and compare the rate of paralytic polio among this group to a control group of nonvaccinated children. This format had the advantage of being easy to administer [illegible] and evaluate, and in addition gave all volunteers the potential benefit of the vaccine. The Vaccine Advisory Committee insisted, however, that a "double-blind" test was necessary to eliminate the socioeconomic bias of the volunteer group and thus provide a scientifically unassailable evaluation. Under this test, half the volunteers would receive vaccine, half placebo.

This decision infuriated the increasingly confident Salk who called the double-blind test a "fetish of orthodoxy. . ." Salk clearly exposed the ethical dilemma of using a placebo in an impassioned letter to O'Connor (1, pp. 191-192):

> . . .if we are aware of the fact that the presence of antibody is effective in preventing the experimental disease in animals and in man, then what moral justification can there be for the purpose of determining whether or not a procedure that produces antibody formation is effective. . .[?] I would feel that every child who is injected with a placebo and becomes paralysed will do so at my hands.

Such an experiment, argued Salk, "would make Hippocrates turn over in his grave."

It is not difficult to sympathise with Salk's viewpoint. With a double-blind test the effectiveness of his vaccine would essentially be proven by the contraction of polio among those children who received placebo. But the emotional content of Salk's plea would also seem to indicate the importance of removing the test from the hands of the discoverer. In a sense, Salk favored an early limited distribution of his vaccine as a test for efficiency, not a carefully controlled, scientifically conducted examination. Sure of the safety and effectiveness of his vaccine, he actually jeopardised its full acceptance in the medical community. This is not to question Salk's scientific ethics or his personal morality, but rather to suggest the difficulties of participating in the evaluation of one's own researches.

Though the National Foundation took full responsibility for the field trials, the VAC commissioned Dr. Thomas Francis of the University of Michigan to evaluate the trials. Francis, a pioneer in the fields of microbiology and immunology, commanded unquestioned respect in the scientific community. The Foundation assured the University of Michigan ample funds to assist in Francis' evaluation. He demanded complete control of the evaluation—with no outside pressure, timetable, or supervision—and O'Connor agreed to these stipulations. Francis also insisted on an injected control

group in at least some states. The decision to have Francis assess the vaccine insured an irreproachable trial.

Before a trial could be attempted, however, the difficult transition from an experimental, laboratory-produced vaccine to a consistent, commercially manufactured vaccine had to be negotiated. Until commercial laboratories could produce vaccine, all talk of a field trial was really premature. Although the National Foundation contacted five major pharmaceutical companies to produce vaccine for the field trials, a complete draft of the requirement for production did not evolve until early 1954, only several months before the trials began (1, pp. 207-211). The Vaccine Advisory Committee supervised the shift to commercial production, making two critically important recommendations. First, the Committee required that Salk conduct an initial trial on at least 5,000 children using commercially produced vaccine before undertaking nationwide trials. And secondly, *all* commercial vaccine for the field trials had to undergo safety tests in three laboratories—the producers', Salk's and the U. S. Public Health Service's Division of Biological Control (12).

The decision to test commercial vaccine in the federally operated lab represents the difficulty of the government's position. The government had no legal role in the trial; no licence was required for such an experiment. The Food and Drug Administration only required that the test drug be safe, not necessarily effective(13). A major medical advance was in the making, with the government's only capacity an essentially extralegal one. Moreover, when it came time for the licensing of the vaccine, the Public Health Service would be in the dark. "We wouldn't know enough about the vaccine and the ins and outs of its manufacture", remarked a Public Health Service official. "We would not be able to act on licence applications for months. But the public would want action in hours" (1, p. 209).

With no official role in the testing of the vaccine but badly needing most information, the Public Health Service gladly accepted the functions allocated by the Vaccine Advisory Committee of the National Foundation. Indeed, the Division of Biological Control, under the direction of Dr. William Workman, scrutinised procedures to the point of threatening the trials. Workman and other government officials realised that, although they had no legal sanctions, they had the responsibility of insuring a safe, effective vaccine (1, p. 208). Moreover, the National Foundation recognised the importance of having the blessing of the Public Health Service before conducting its trials.

Opposition to Trials

Scientific opposition to Salk's vaccine remained formidable as the trials approached. Some scientists had difficulty duplicating Salk's inactivation process in their own labs, while others questioned the viability of a killed virus vaccine. Dr. Albert Milzer had been unable to reproduce the Salk vaccine in his laboratory at the University of Chicago. He repeatedly found live virus in the vaccine—an ominous result. Dr. Albert Sabin, at work on an oral, attenuated vaccine, became Salk's chief antagonist. Only one month before the field trial was set to begin, Sabin called the test "premature". Salk and the National Foundation attempted to combat the criticism: "I give every possible assurance I can and that medical science can that the antipolio vaccine will be safe. I will personally be responsible for the vaccine", declared Salk (14, 15).

More troublesome than this criticism, however, were the continued difficulties of the commercial producers in their attempts to replicate Salk's vaccine *en masse*. Scientists at the Public Health Service's Division of Biological Control harbored serious doubts about the abilities of the manufacturers to produce consistently safe vaccine. This reflected, in part, inexperience in the histopathology of polio (10, p. 513). But it also revealed a very real production problem. In March 1954, Dr. William Workman suggested that the field trials be postponed:

> I again come to the conclusion that the specifications and minimum requirements. . .are inadequate to assure the reasonable regularity of production of a vaccine of acceptable safety to be used in the field study. Under the circumstances, I cannot escape the feeling that an occasional lot. . .which does pass the test, may actually contain living virus and be unsafe for use. My recommendation is that the proposed field studies be postponed until—(1) specifications and minimum requirements can be revised to give greater assurance of the safety of the final product; (2) it has been shown that the vaccine prepared in accordance with such specifications meets acceptable criteria for safety (1, p. 221).

It should be emphasised, however, that the government had no legal means of postponing the trials. The National Institutes of Health and the National Foundation agreed that, rather than revising the safety tests themselves, companies must produce eleven *consecutive* lots of safe vaccine for any to be acceptable for use. With this agreement, plans proceeded for the field trials.

Despite the persistent opposition within the scientific community, the National Foundation and the press stimulated public optimism for the vaccine's success. The dual role of the National Foundation—philanthropic and scientific—created tensions. The profusion of positive press release, essential to fill the Foundation's coffers, jeopardised scientific judgments (3, pp. 82-85). The National Foundation announced publicly the plans for a mass field trial months before a commercial laboratory had produced any vaccine (16).

The press played upon the drama of the situation; no medical discovery before or since has been covered as intensely. Beginning in 1953, progress in the vaccine's development was regularly front-page news in the *New York Times*. Press reports were often filled with speculation (17):

> If the vaccine fulfills the hope that at last a way has been found to cope with poliomyelitis as effectively as public health officers cope with smallpox or typhus, Dr. Salk will have scored one of the greatest triumphs in the history of medicine.

Although Salk and the National Foundation attempted to discourage such optimistic conjecture, Basil O'Connor's euphoria could not be contained. He declared that the development of the vaccine had brought the fight against polio to the "verge of victory" (18). The *New York Times Magazine* called the trials the "climax of a stirring medical drama" (19).

The vaccine's notoriety undermined the control of the scientific community. The public now clamored for the vaccine, making it increasingly difficult for scientists with reservations to resist the demand for mass testing. Sabin's attacks on the vaccine, became more personal in nature: "Let us not confuse justifiable optimism with achievement" (20). And Salk's defence became less scientific: "I have the courage of

my convictions. I couldn't do it unless I was more critical of myself than others are of me. It is courage based on confidence, not daring, and it's confidence based on experience" (21). Salk continued to announce that he would take "personal responsibility" for the safety of the inoculation—a courageous, if ill-advised stand (22). The *New York Times* felt qualified to endorse the trials, remarking (23):

> No matter how important a medical discovery may be, there are always skeptics who try to strip it of importance. We need these skeptics, but sometimes they may be nuisances.

At this point the skeptics were threatening the test. Several states withdrew, from cooperation in the trials after Walter Winchell announced on national television and radio that the vaccine "may be a killer" (24).

This is not to argue that the press and public should have no role in a medical discovery, but rather that, in this kind of atmosphere, where public demands and expectations are great, sound scientific judgment may be jeopardised. *The Salk vaccine was sold to the public before its safety and efficacy were proven.*

The National Foundation must bear some of the responsibility for the public fervor which surrounded the field trials. Perhaps the most objectionable of all the Foundation's pronouncements was that the test was exclusively designed to test the efficiency of the vaccine. According to the Foundation, safety had already been conclusively demonstrated. In light of the production difficulties, this was a particularly bold assertion. The NFIP struck the word "experiment" from its literature; this was a "trial" vaccine, not an "experimental" vaccine. Although the test was conducted on a voluntary basis, the *quality* of informed consent is thus highly questionable.[6]

On April 25, 1954 the Vaccine Advisory Committee set up final guidelines, giving its approval for the trials. The United States Public Health Service issued the following statement (26):

> We believe that the judgment of the Vaccine Advisory Committee is sound and that the National Foundation for Infantile Paralysis is justified in proceeding according to the Committee's recommendation.

The next day the field trials began. With more than 1,800,000 children participating, the trials mark the largest clinical test using human subjects in the history of medical science. No medical experiment ever held such public attention. According to a Gallup Poll conducted in May 1954, 90 per cent of the American people knew of the field trials, more than could identify the full name of the President of the United States (1, p. 268).

The test, conducted in 45 states, used placebo controls in 84 areas and observed, nonvaccinated controls in 127 areas. More than 400,000 children received three injections; about 200,000 of these actually received salt-water placebo injections rather than the test vaccine. Along with blood samples to test antibody titer, Dr. Thomas Francis now had the information needed for a conclusive evaluation of the vaccine (1, pp. 238-261).

Speculation was rampant concerning the results of the field trials, but Francis promised no annuoncements until the spring of 1955. He had more than 144 million pieces of information to assemble and review. Some days the Evaluation Center's morning mail filled an entire elevator (1, p. 255).

A critical problem faced the National Foundation during this interim period while awaiting Francis' report. Without a federal licence (which could not be obtained until the vaccine was finally evaluated) and without advance orders, the pharmaceutical companies could not afford to continue to produce vaccine. It was not difficult to foresee a situation in which the vaccine would be found to be safe and effective, and yet there would be no vaccine available for the 1956 polio season. Basil O'Connor, with typical boldness, ordered $ 9 million worth of vaccine from six pharmaceutical companies--an expensive gamble on the vaccine's approval. Of course, if the Congress had been willing to allocate funds, this risk could have been avoided. But the government seemed content to let the National Foundation carry the ball.

On April 12, 1955, the tenth anniversay of Franklin Roosevelt's death, Francis released his evaluation, one of the most comprehensive epidemiological studies ever conducted. According to Francis, the safety of the vaccine was "powerfully affirmed" (27, 28). This is an interesting observation in view of the National Foundation's reluctance to consider the trials a test of safety. Francis found the vaccine 80 to 90 per cent effective in placebo-controlled areas, slightly less in observed controlled districts (28, pp. 15-19). In short, the vaccine appeared to be a tremendous success. The nation celebrated; for many parents, it seemed, the anxious summers were over.

The successful development of the polio shot characterised the Eisenhower years as the moon shot did a later era. The image of the scientist-hero, unhampered by government intervention, held great appeal. The press proclaimed Salk a national demigod, while some colleagues, resentful of all the attention he received, suspected him a demagogue. The vaccine became a perfect cause for an age in which ideology was suspect.[7] The scientific atmosphere of the 1950s was wrought with Cold War overtones. The vaccine, an affirmation of American scientific and technological progress, was viewed as a triumph of the American system. American science, pragmatic and purposeful, demonstrated the continued viability of the promise of American life.

In Washington, Ms Olveta Culp Hobby, Eisenhower's Secretary of Department of Health, Education, and Welfare, signed licences for six companies to produce vaccine. These companies had, of course, been producing vaccine all along; the licences gave them authority to distribute it.[8] The National Foundation's vaccination programme for school children began immediately, with youngsters who had received placebo during the field trials given top priority. For all intents and purposes this should have been the dramatic conclusion to the conquest of polio. Unfortunately, it was not.

The Cutter Crisis

On April 26, 1955, two weeks after Francis' Ann Arbor proclamation of safety, five cases of paralytic polio were reported among children who had just received vaccine. All five victims, it was found, had received vaccine from the Cutter Laboratories in California. Surgeon General Leonard Scheele requested that Cutter recall all its vaccine pending an investigation. Remarkably, the government had no power to order the Cutter Labs to withdraw the vaccine, but Cutter readily complied. The infamous "Cutter Incident" would, however, eventually encompass 25 states and Hawaii, 260 cases of polio, and 11 deaths (1, p. 316).

These cases of polio cast an ominous cloud over the Salk vaccine, the National Foundation, the pharmaceutical companies, and the National Institutes of Health. What had gone wrong with the most rigorously tested drug in medical history? The most obvious cause of the problems was that the careful triplicate testing of the field trials had not been continued for the licensed vaccine (12, pp. 329-331). Written protocols submitted by the manufacturers to the Division of Biological Control were the only legal requirement. The Division had the right to make spot checks, but did not exercise this option. Moreover, the consistency standards of repeated safe batches which had been devised for the field trials were not required of licensed vaccine. In brief, safety precautions for commercially produced, licensed vaccine fell far short of the guidelines used for the field trials.

During a series of meetings of top virologists and advisers called together by Surgeon General Scheele, it was decided to let the vaccination programme continue. But this consensus began to erode quickly. Dr. John Enders, regretting his approval for continuing the programme, wrote to Dr. William Sebrell, the Director of the National Institutes of Health (32):

> I am forced to conclude that active virus might be present in certain finished lots of vaccine prepared by any or all of the manufacturers concerned. I cannot, therefore, longer assert my confidence that the poliomyelitis vaccine now being distributed and injected consists solely of inactivated vaccine and in consequence, of harmless virus.

On May 7, Scheele *requested* that the national vaccination programme be suspended pending further studies.

Scientific criticism of the Salk vaccine intensified. In June, Enders and Sabin testified before a House subcommittee investigating the crisis that the vaccination programme should be stopped and the licences withdrawn until safety could be conclusively proven. But they were overruled by an equally eminent group of scientists who expressed confidence in the quality of the vaccine if properly produced (33).

On June 9, Scheele released a Public Health Service "Technical Report" on the Salk vaccine, an attempt to explain and correct the problems which produced the Cutter crisis. The "white paper", though not a complete whitewash, was carefully written to avoid directing blame (34).

> The Salk vaccine applies new principles in the production of vital vaccines. The speed of its development, which reflected the increased tempo of all medical research, created problems in biologics control amenable to solution only with the accumulation of knowledge and experience. It is likely that problems of equal complexity will be raised by the development of other new vital vaccines.

This analysis obscured the inadequate preparations made by the Public Health Service for testing the vaccine. Despite the easily predictable demand for the vaccine, the Bureau of Biologics staff remained at only 35, insufficient to carefully scrutinise the commercial production process. Moreover, the protocols required of manufacturers did not provide enough information for proper safety-evaluation. The contrast between the careful tripartite testing of the trial vaccine and the testing of the commercial product is a remarkable example of the lackadaisical attitude of the government toward biological control.

The irresponsibility of the Cutter Laboratories must not be overlooked in evaluating the crisis. Repeated difficulties in producing safe vaccine were experienced by the Cutter Labs; 9 out of 27 lots produced had contained live virus and were discarded. Yet Cutter failed to report this inconsistency to the Bureau of Biologics; the company only submitted protocols for batches which passed their safety test (34). Cutter officials never asked for assistance from NIH or Salk. *Their ethical commitment to produce safe vaccine must thus be seriously questioned. But it must also be remembered that they acted entirely within the letter of the law.* The NIH had no consistency requirement and did not require reports on discarded vaccine or production difficulties.

The Public Health Service's "white paper" explained the manufacturing problems in terms of inadequate sensitivity of the safety tests (34, p. 17):

> Each producer had had difficulties in processing and testing materials at various stages of production. Because some lots were obviously unsatisfactory they were not submitted for release, and therefore no protocols on them were submitted by the manufacturers. These experiences showed the need for more sensitive and better controlled testing methods, and for greater attention to the history of consecutive lots.

The Public Health Service revised the minimum requirements for production in light of the Cutter incident, making them mandatory standards. The Division of Biological Control was reorganised, becoming the Division of Biologics Standards with larger facilities and a fourfold increase in staff.

The relationship between the commercial producers and the federal government lay at the heart of the Cutter incident. This association became the target of serious investigations in the days following the tragedy. Victor Haas, the Director of the National Microbiological Institute, a division of NIH, evaluated the government-pharmaceutical connection in a series of memos to Sebrell in May 1955.[9] Haas argued that the responsibility for safety must ultimately rest with the manufacturers, and that the government could not (and should not) participate intensively in the safety testing of biologic products (35):

> It has been the principle of operation that this intensive participation in what is essentially a part of the manufacturing process, properly should be only a temporary activity for the Laboratory of Biologics Control. Once it has been established that manufacturers can produce safe material (and production experience and field trials of last summer formed the basis for licensing manufacturers for polio vaccine), this principle of operation would assume that periodic plant inspection, knowledge of the capabilities of supervisory personnel, review of protocols, and spot-testing of materials would suffice to assure us of continuing acceptability of any product within the limits imposed by available knowledge and human acceptability to error.

Intensive and continuous testing in government laboratories, Haas believed, would destroy industrial initiative and responsibility. According to his evaluation, more testing and inspection would not have prevented the Cutter incident. This is a dubious assertion, for certainly the manufacturing difficulties experienced by Cutter and the other pharmaceutical companies would have been revealed, raising questions of safety.

Finally, Haas suggested that it would be improper to overreact to the Cutter incident by revising existing standards of control. He ascribed the current fervor to the tremendous publicity which the polio vaccine had generated (35):

> Had the poliomyelitis vaccine been used on the same quantitative scale that applies to other biologicals and had an incident occurred, there would have been very little attention given it other than by the constituted authorities. The many factors which have gone into creating a demand for a safe and effective poliomyelitis vaccine, which would be available at the earliest possible time, should not force us to abandon careful and sound judgment as to what is the best method for the operation of biological control over the years.

The Cutter incident exposed the inherent weakness in the

argument for governmental laissez-faire with regard to biologics control and pharmaceutical production. The limited role of the federal government clearly reflected the Eisenhower political philosophy. Olveta Culp Hobby eventually lost her job, largely because of the vociferous criticism of her handling of the vaccine programme. In addition, the government's action was circumscribed by the miniscule legal powers of the Public Health Service, essentially unrevised since 1902, a time of relatively primitive pharmaceutical production. The government continued to assume that industrial interest in producing a safe product would ensure the public's safety.

In view of the federal government's minor role, the National Foundation assumed massive responsibilities in the development and distribution of the vaccine. Combining the functions of fund-raising, research, testing, and distribution, the National Foundation often found its multiple roles conflicting. Although well-intentioned, the publicity mill created an atmosphere in which demand threatened to outstrip sound scientific decision making. In such an environment, ethical questions can become obscured. The field trial, for example, though brilliantly engineered and promoted, and meticulously evaluated, lacked truly informed consent.

The ethical aspects involved in the development and distribution of the Salk vaccine are varied and complex, and the historian must be leery of second-guessed, overarched generalisations. But three key issues which demand continued attention emerge. First, testing with human subjects presents a series of problematic considerations, from the suspect use of mentally defective children to the use of healthy, parent-volunteerd youngsters. High ethical standards for defining risk-benefit ratios must be exercised in such investigations; use of placebos complicates such assessment. Moreover, informed consent is liable to compromise (36). Second, the obligation of pharmaceutical companies to manufacture safe products cannot be assumed, especially when pressures to market a new drug become intense. The third point is most striking: the federal government's minimal role in a major scientific advance. Although the government cannot be the final arbiter of ethical medical judgment, it is the only body which can provide a central direction and standard for these practices. By abdicating a more active role, the government invited the possibility for crisis. The Salk episode seems to indicate a less than complete commitment by the government to the public welfare.

In the years since the discovery of the Salk vaccine, the problems of pharmaceutical control have expanded rather than diminished. The capacity of the government has remained limited in overseeing industry. The Government Accounting Office, Congress' investigative arm, recently attacked the lax attitude of the Food and Drug Administration's drug testing (37, 38). According to the GAO's report, human subjects are exposed to unnecessary risks and the FDA has approved new drugs for public use on the basis of highly questionable data. FDA attempts at self-investigation have proven largely useless (39). The FDA has failed to enforce its standards and, according to many reports, has served as a lackey to the major pharmaceutical companies (40). In its mission of public protection, the FDA, by any standards, has proven to be grossly inefficient.

The history of the Salk vaccine, from the initial research through testing and production, speaks clearly to the present. The institutional connections through which a new drug is channelled from laboratory to market remain uncertain, subject to frequent short-circuit. The time between discovery and production has steadily decreased, augmenting the difficulties implicit in regulation. Most importantly, the federal government has failed to keep pace with the rapid innovations in medical and pharmaceutical practice, at great cost to the public welfare.

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Notes

1. Several studies of the development of the Salk vaccine have been written, although none is definitive. The most comprehensive of these is *Breakthrough: The Saga of Jonas Salk* by Richard Carter (1). Rich in detail, though weak in analysis, this book was particularly helpful in my study. Also recommended are John R. Wilson's *Margin of Safety* (2) and Aaron K. Klein's *Trial By Fury: The Polio Vaccine Controversy* (3). The definitive medical history of poliomyelitis is *A History of Poliomyelitis* by John R. Paul (4).

   The archives of the National Foundation have unfortunately been closed to researchers. This rich collection of materials contains valuable information pertaining to the development and distribution of the Salk vaccine.
2. For a more extended analysis of the implications of consumer culture, see reference 7.
3. Nations with high standards of sanitation and personal hygiene actually prove to be more susceptible to enteric viral infections such as poliomyelitis (4, pp. 364-365).
4. For an explanation of attitudes toward children in the postwar era, see reference 8.
5. See references 1 and 2 for extended discussions of the bitter relationship between Salk and Dr. Albert Sabin of the University of Cincinnati.
6. Parental consent was required for a child to participate in the trial. Excellent essays on informed consent and human testing are contained in reference 25.
7. Excellent discussions of political and cultural life in the 1950s are contained in references 2 and 30.
8. One of the six companies was the Cutter Laboratories of Berkeley, California. The Region Oral History Office of the University of California at Berkeley recently completed an oral history memoir with individuals from this organisation, documenting its involvement with the vaccine (31).
9. These memoranda, marked "confidential" have only recently been opened to researchers as a result of a Freedom of Information suit. They are a highly valuable source for deciphering the government's view of its role in the development of the vaccine (35).

References

1. Carter, R. *Breakthrough: The Saga of Jonas Salk*. Trident Press, New York, 1966.
2. Wilson, J. R. *Margin of Safety*. Doubleday, New York, 1963.
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Pharmaceutical Industry in Latin America

BOTH the transnationalisation and oligopolisation of the pharmaceutical industry is well known. A few companies occupy a large percentage of the worldwide market. In 1985, the fifteen largest companies in the world were responsible for 37 per cent of the total pharmaceutial sales (US $ 79.8 billion).

This same phenomenon can be witnessed in Latin America, which accounts for 7 per cent of the world pharmaceutical market, or approximately US $ 5.5 billion. In 1985, the 10 leading companies in Latin America—all transnationals—captured 30.5 per cent of the pharmaceutical market in the seven countries studied (Argentina, Brazil, Columbia, Chile, Mexico, Peru and Venezuela). Sales in these countries reached US $ 4.13 billion that year.

The largest markets for pharmaceuticals in Latin America are Brazil, Mexico and Argentina, which are also the countries with the largest populations. In 1985, the total market in Latin America was valued at US $ 5.5 billion; 69.3 per cent of these products were sold in these three countries.

The most frequently sold products in the region are antibiotics, cough preparations, antirheumatics, analgesics and vitamins. This illustrates well the pattern of pharmaceutical consumption in this part of the world. On the one hand, while it is true that there is a high incidence of infectious illnesses justifying the use of antibiotics, these products are often used indiscriminately. Of more concern, however, is the fact that "cough and cold preparations", many of which are simply useless for the purpose intended, occupy second place on the list of sales. Analgesics and antirheumatics—symptomatic drugs—also occupy a preferential place, while products containing vitamins represent a considerable proportion of the sales, thanks to promotional campaigns which try to present them as a solution to the nutritional problems of the Latin American population.

The most startling fact, however, may be that "Novalgina", produced by HOECHST, occupies first place in the sales list, in spite of the fact that its principal active ingredient—Dipirona or Metamizole—has been withdrawn from the markets of many countries because it can produce agranulocytosis, a sometimes fatal blood condition.

[From ISIS Women's Health Journal, no 3].

Beyond Medical Solutions

guy poitevin

TAKING SIDES. The Choices Before the Health Worker by C. Sathyamala, Nirmala Sundharam and Nalini Bhanot. ANITRA, 1986, pp 320, copies available at B-7, 88/1 Safdarjung Enclave, New Delhi 110 029. Rs 70

THE authors address this sort of committed rural health handbook written in English to middle level health workers' engaged all over the country in rural health services. They take as a starting point, on the one hand, the arguments raised in the last 10 to 15 years against the effectiveness of modern medicine, and the other hand, the failure of the alternative tried out to substantially improve the health situation in rural India. The reason for both is assumed to be the exploitative nature of a society of which the social, political and economic forces by shaping the way of life of the people produce the disases affecting by and large the population.

Those who immediately and hopelessly confront this social and economic reality of the people they work with, are the middle level health workers upon whom the health services actually rest. Yet, "it is these workers who are least involved in a critical examination of their work". Firstly, being located in the lower rungs of the hierarchy of medical services, they are just expected to follow orders. Secondly, their training does not prepare them to conceive, let alone to suggest, appropriate alternatives. Frustration, insensitiveness or despair eventually overcome them. Even so, out of their experience of training programmes, the authors are convinced that those scattered and isolated health workers could and should achieve a lot once helped to develop the proper perspective required with regard to rural health care. The four sections of the book make, therefore, an attempt to help middle level health agents to learn from their disillusion, and instead of relapsing into the apathy or the self-complacently irresponsible stands of public health employees, lead them towards attitudes and practices of social health activism.

The first section describes the baffling experience of Radha, a woman health worker who happens to leave her city hospital to work in a rural dispensary. Absolutely unprepared for this by her training and previous experience, she is progressively confronted with a series of puzzling questions regarding unexpected attitudes and behaviour of the villagers. She painfully realises that her medical knowledge and skill prove of little use. Unable to cope with too many doubts, she feels out of place, she is frustrated: she comes back to her city hopsital.

Around eight common incidents which helplessly bewilder her in the course of ther work, are structured eight chapters which discuss the issues involved. They clarify the health riddles that Radha could not solve on account of her inability to understand the nature of the constraints which inexorably bear upon people's lives. She had only medical answers of a curative type to issues and needs which required first of all a social and psychological analytical insight. The inadequacies of her technological responses lead her to experience that as a pure medical agent she is unfit to meet the health problems of a common man. The following are the questions which pushed her to the limit and that the book, in a second part of the section, helps the health worker to firstly come to terms with while embarking in tasks of rural health care:

> Why don't people rush to get treated early?
> Why do people have faith in local healers?
> Why don't common people have satisfactory access to health services?
> Why are rural areas wanting in good medical practitioners?
> Why do people not implement even simple health messages?
> Why should a health worker know whether and to what extent people are poor or rich, influential or looked down upon? Aren't diseases independent of any other consideration?
> Why do people prefer to impoverish themselves with too many children?
> Why is it that a few people avail of so many health facilities and so many have so little of them?

The first section shows how the health care system as a development asset, no more no less than land, water, credit system, etc., obtains the status of a commodity socially appropriated by those who can afford it or snatch it in proportion to their social, economic and political position of power. As a consequence, ill-health is an unequal access to health commodities when these latter are made unavailable to some—actually many—by others—a few. Ill-health, therefore, mirrors and measures the state of deprivation of the subaltern. Ill-health is injustice and no simple natural disorder, no less than deforestation, unemployment, hunger and malnutrition, starvation wages, etc. The survival strategies of the deprived sections do not bear witness to their ignorance and backwardness but to the sway of iniquitous social forces. Once socially unaware and naively well-intentioned health workers like Radha understand this, they may hopefully realise that they had better feel anything but frustrated, if they really mean to avail the common man of their professional capabilities. But then, a second stumbling block threatens them.

Limitations of Established Modern Medicine

The second section deals with the inadequacies of the health workers which should not necessarily be ascribed to personal failure or inability. They are largely due to the inherent limitations of established modern medicine itself, the assumptions of which need questioning. Its development is as much based on scientific and rational principles as shaped by powerful economic and political groups. The second section expounds how the interests of doctors and big businessmen while contributing to the development of modern medicine, created also a limited view of health, diseases and healing process. New theories shifted the focus of disease causation from the social conditions that bred disease to the

immediate cause which was the germ, and the attention was diverted from poor nutrition, bad living and working conditions, exploitative labour and sex relations, etc. Disease became a physical event within an individual's body and care focussed on drugs, surgery and hospitals. Preventive measures dealt with immediate environment and diseases at the individual level. Health became a neutral and purely technical subject with its experts wielding absolute authority and monopoly on medical research management and health care policies. Big industrialists prompted modern medicine in order to increase the productivity of their workers through control of diseases by therapeutic techniques dealing with the immediate cause rather than the primary reason of illhealth, i e, the exploitative social relations of production. Modern medicine served the interests of those in power and developed to the extent it served these interests. Medical theories justified even the inferior roles of women.

As a matter of fact, the potent remedies and techniques developed with the support of businessmen had a very small part in reducing morbidity and mortality in the western countries. Their major decline had already taken place before specific medical technology was introduced. Death rates for measles, scarlet fever, tuberculosis and typhoid were already negligible by the time effective medical interventions were discovered. This tremendous achievement was not the effect of drugs nor doctors. It was due to improvement in living standards and public health measures. Biomedical technology once introduced had a very limited impact in improving the health status of the population and was responsible for no sharp decrease (except for polio) in mortality rates due to infectious diseases. Only 3.5 per cent of this decline took place because of medical interventions.

Ill-health in Independent India

The third section looks at the development of health services based on modern medicine in independent India with regard to the activities commonly undertaken by health workers in rural areas. Their limitations are pointed out and explained by the fact that they have not been planned keeping in mind the social and economic constraints of the majority of the villagers. As a result, health workers fail to meet the people's needs and by-pass the major causes of ill-health. Examining the policies of the government regarding these rural health programmes it is shown how health needs are actually used as a cover for serving the interests of the wealther sections of the rural population. A comprehensive review of the following rural health problems provides the essential results of the studies in the matter together with an analysis of the inter-related factors: a health-worker can afford to ignore neither of them. In each case the inadequacies of the government health policies are exposed and shown as basically due to the narrow health concepts of a purely curative medicine system absolutely blind, to the structural-social dimensions of health issues.

Health of children: Data on high mortality and diseases occurrences are related to structural constraints such as low nutritional status, low education status of women, inadequate access to medical care at birth and clean water, switch-over to tinned food, sex discriminations etc.

Health of women: Sex-ratio, life expectancy, mortality patterns and causes of death, maternal mortality, nutritional status, access to medical services, amniocentesis, infanticide are determined by the discriminatory effect of the social and/or economic degraded status of women on the one hand and on the other hand, by the medical profession being concerned not with women's health but with their (male) child's issue.

Health of adults: Given the over-all importance of their undernutrition, the reasons for this and the inadequacies of the nutritional programmes are exposed at length. No health worker may fail to be conversant with the misleading debates and approaches in the matter, with the deceitful talks on the so-called minimum wage, with the criminal exports of high protein food, with the decrease of acreage under cheaper coarse grains, with the export of rice, with the wasted buffer-stocks of cereals, etc. In such circumstances, "feeding programmes and minimum wages themselves become oppressive strategies in the long run".

Health education: Some examples show how the official health education as much as health advertising, resembles a harmful brainwashing by its explicitly or implicitly false or socio-culturally repressive messages, and by its concealment of important aspects. The demystification through a critical reading of all health messages may indeed prove a skill difficult to acquire when everybody takes for granted that education is merely a useful transfer of necessarily objective information. Actually, the assumptions of health education as commonly practiced should be denounced as often biased in such a way as to prove in the long run to actually impair the health status of the majority of people. The emphasis on individual responsibility and fault, the theory that health problems cannot be solved without a lot of money, the persuasion that the poor being ignorant, illiterate, superstitious and backward cannot but turn a deaf ear to health advice, the greater importance of men's health, the dependence on modern medicines and the knowledge of doctor's who alone know best, etc are message which conveniently remove the responsibility for ill-health from those who create and maintain "the exploitative practices" conducive to the poor's helplessness.

Family Planning Policy, (FPP): The theoretical and use-effectiveness of the commonly used contraceptive methods are examined and advice in given to make them helpful in improving women's health, as they are a meaningful way to this effect. The present failures are shown to be due to the implementing strategies and false assumptions such as the primary interest for population control at all costs, the belief that population growth is the cause of poverty and underdevelopment, etc. Family planning methods will succeed only if they are accompanied by an overall improvement in the socio-economic conditions of everybody. Failing this, the failure of the FPP can be considered an effective 'resistance' by the poor against the detrimental effects in their everyday life of government agricultural, social and economic policies: a survival strategy in front of socio-political mechanisms of deprivation.

The Village Health Worker's Scheme (1977): It is discussed and evaluated in relation to one basic principle, viz, the selection of the workers by the village community.

Curative services: Overuse and misuse of drugs, harmful role of drug companies, cost of drugs, etc. such problems are discussed and suggestions are made to help health workers overcome them.

Setting Off Again on the Right Foot

The fourth section takes stock of the principles for an adequate practice on the part of health workers: focus on changing the social environment for long term improvement in the health status of the most affected groups among local communities; understanding of and dealing with, the root causes of ill-health; choice of identifying oneself with those who are the most likely to fall sick; decision to operate with all of them as a collective; will to develop their insight into the reasons of their ill-health and foster their collective strength to act against them; attempt to make use of all resources available at the village and block level in a self-help spirit and with the firm conviction of one's own right to health vis-a-vis the government health services, etc. Then, an alternative model of health practices and health education is chalked out for the guidance of a middle level health worker already working in a rural hospital, dispensary or health centre but willing to spare time and resources to operate along the above guidelines although deprived of any experience of village work. Criteria are suggested regarding the selection of two or three villages to work in/around her centre; directives are given to help her develop a proper understanding of those villages through a close relation with people and renewed patterns of communication; the necessity is stressed of bringing people together for them to consider collectively their own needs, find out the reasons of their ill-health and seek solutions; the modalities of selection and training of a voluntary village health worker are clarified; explaining how to keep a diary, conduct a survey or a group discussion on health, from a permanent group of concerned people, deal with problems in a manner really conductive to the group's collective initiative and ability to act on its own, organise people to get due services from the government.

We thought proper to give this rather extensive account of the contents of the book under review to convince the health workers it is addressing of the many practical advantages they cannot fail to draw from it: well-researched statistical information compiling the most relevant data on each topic, didactic synthesis summing up studies otherwise scattered and lengthy, eight pages of referential documentation, a glossary. Considering the alarming and relentlessly resilient extent of ill-health of this country, one cannot but expect many health workers to make choices and definitely take sides along lines expounded in this reference and guide book. Every medical practitioner should hopefully have the opportunity of getting through this book and honestly questioning his practices and the methods of his/her institution in the light of the critical insights provided by this challenging appraisal of rural health problems.

The approach rightly avoids two pitfalls. The first one is to simply ask for multiplying the rural health services (doctors, drugs, dispensaries, injections, surgical equipment, etc) as others agitate for more dams only to bring more health and irrigation facilities to those who can lay hands upon them, with the same result in both cases: the majority of the needy is kept deprived of the means to meet its primary needs of health care and of the water required for irrigating its staple food crops. An unflinching sociological insight only may preserve us from short-sightedly lapsing into this trap. The most commendable quality of this review of rural health problems is its permanent claim to refer health issues to related structural-social factors and the overall marginalising dynamics engineered by them. Disparities in health status measure the extent of social discrimination and unequal appropriation of the means of health. There is no health nor ill-health *as such*: this approach has been the treachery of the purely curative or biomedical modern medicine for reasons known to its promoters. Both of them are outcomes and symptoms of a given social structuring on the one hand, and socio-cultural/anthropological systems of representations on the other hand.

The two critical questions to be raised concern, firstly, the exploitative social relations of health based on the present system of established modern medicine, and, secondly, the system of cultural-anthropological health representations. If the first question, focus of the book, is methodically dealt with, the second dimension, although occasionally and commendably tackled (for instance, illness seen as the result of falling out of harmony with the universe, p 14-17, or the women's inferior value as an explanation for women's lower health status, p 148, 151), would yet deserve a wider and independent consideration that the somehow narrow socio-economic perspective of the authors overshadows.

Let us stress the importance of this second aspect with the example of the exorcism practices performed by religious healers. Around these latter, symbolic sets wave together in ritualistic health practices, the sick, the sacred power, the departed, the go-between-the holy man, the enemy, the genders, etc. (Poitevin). Especially in a traditional agrarian community, health, death, disease, injury, wound, infection, healing are no natural events. Body, blood, hair, sex, menses, birth, injections, etc, are invested with far-reaching and interconnected meanings. They are socio-cultural constructs before being subject to the specific and restricted medical constructs, outcome of the particular and alien assumptions of modern medicine. We cannot take for granted that these latter will easily erase the previous constructs. On the contrary, the traditional meanings are likely to turn up the new speech in such a way as to give it a fitting place in their midst. The point at issue is here that the working of the "exploitative forces" so often rightly referred to, would still be better understood once are discovered both the autonomy and the interdependence of those two levels of analysis. (Althusser, 1970). They overlap in reality as two aggregate dimensions the cumulative effect of which is to be understood in each given social formation under consideration.

A common and easy example may illustrate this interplay. Why do rural people feel a deep and pressing urge for injections? Some traditional unconscious drives and representations (for instance, expectation of a sudden and miraculous recovery through some mysterious device: pricking and pain may act here as a substitute to the ritualistic cutting the throat of a cock) have to be explored and brought out under conscious light. Why do medical practitioners not try to scientifically demystify and reveal to their trustful clients, the quasi-religious nature of their demand, instead of promptly complying with the people's expectations, if not anticipating them, often without any medical necessity? And why do they not, as a principle, entrust this task only to the nurse care? The reasons are known. In doing so, male doctors invest themselves with this very power otherwise attributed to the local healers whose practices are no less mysterious and

knowledge no more transcending their reach and consequently calling for the same complete trust (an important message conveyed by the health education programmes, as appropriately stressed by the authors, p 185). One difference: instead of accepting free gifts, the modern practitioner will claim substantial fees taking advantage of the anxiety and faith of his client—biting again into the starvation income of the needy. In short, in the process, the traditional set of feelings and representations as well as the passive, helpless and submissive relations of health woven around the sacred healers' practice provides the rationale for the acceptance and social sanction of the exploitative practices and the overall male domination of the modern class of medical practitioners. This acquires a specific gender dimension when we remember that it is mainly women who resort to the ritualistic healers (Herzlich and Pierset, 1984).

The book keeps clear also of a second pitfall which usually consists in resorting to health services offered by voluntary agencies with technical qualities and appropriateness of which the public health care system is deprived. The main concern is here for professional performance. This is short of the political will and thrust required to cope with the remote and determinant causes of ill-health as well as with the public dimension of a national service. Each citizen, especially the deprived one, is entitled to health as a right and not as a commodity to be made available even at a lesser cost and served wrapped in humanitarian feelings.

Strategically speaking, it follows from this that health for all cannot be achieved unless it is health by all, i e, obtained as a right by the majority of all those who are kept deprived of it. As neither the public health care system as it operates nowadays nor the troups of NGOs in rural health care can be expected to secure health for all in no century, those concerned with obtaining their right share of health facilities are left with one single alternative, viz, to fight and vindicate their right. This is the right perception which upholds the whole approach.

Need for Tactical Model of Action

To the tactical question "How to go about it?", the answer is that the proposed alternative approach is firstly to be monitored from within the low ranks of the health care system, by the middle level health professionals transforming from within their concept of health and practice of health care. They are staged as the sensitive category through which defiance and innovation will arise. Why we may ask, do the authors assume that this category is potentially fit for spearheading the envisaged radical changes which will reconstruct the established health system? From their own experience? From the fact that this category of workers remaining close to the common people while being technically trained, may prove immediately operative, provided they only shift their socio-cultural allegiance from the class interests of the medical profession towards the lower sections of the rural population? But then, why do the same authors, from the last chapter, characterise these middle level workers as short of experience of village work, deprived of proper training, used only to follow orders and the least involved in a critical examination of their work?

In the fourth section, they are shown a plan of action, and equipped with pedagogical skills enabling them to raise, mobilise and train village health workers in two or three villages around their dispensaries. From where and how do they become all of a sudden motivated for investing their time, energy and thinking capacity in tasks for which, as a professional category, they could only feel shy or have aversion? And we know that as a rule such is actually the case. Before showing how motivated health workers might motivate village health workers, we would also like to know how the low-rung health workers as a category could themselves become enthused in a proportion sufficiently significan as to make them a category and not only a few individuals, initiators pioneering the envisaged alternative methodology of health practice.

Barring exceptional cases which make no use of tactical model of action for social change, one fails to realise how an individual woman from the middle rung health workers may embark alone in such attempts without at least two minimal pre-requisites. The first one is institutional backing, however loose or informal it may be, not only to support her after she has started but to secure since the inception precisely what is taken for granted, viz. the means of a radical reappraisal of her whole training and practices. To put in her hands *Helping Health Workers Learn* (Werner and Bower) is no sufficient answer: a book does not offer a supportive group. In their final inset (p 307), the authors have themselves raised the question to leave it open: does the health worker continue to spend most of her time in her dispensary or in the village? Does she want to radically transform her role? Can she do it within her present institution or should she work with another group? How can she build up support for her work and herself? Unable to visualise a definite plan for mobilising the category they address, the authors satisfy themselves with calling those concerned to chalk out for themselves their course of action.

Here comes the second prerequisite. Irrespective of the forms and nature of the 'institutional' framework, the health worker will not be able to act according to the new role she wishes to assume unless groups of villagers either raised by her or anyone else, organise themselves and through a sustained effort of cultural action develop among themselves and the population that dynamics from the bottom required to put them on the way towards what we have labelled health by the people. Following the catalytic effect of the health worker, it is this organised strength, embryo and basic element of a wider health movement, which may come to effectively bear upon the health system to force it to change in the long run. One may finally wonder whether in the scenario imagined by the book under review and the course of action to be chalked out, the leading role is not to be more plausible ascribed to the villagers' organisation. Without this organisational prerequisite, an isolated female health worker in rural areas cannot achieve much whatever the clarity of her choices; but as a health professional taking sides with such organised groups of villagers she may, for sure, work wonders. To this effect, the chapters 3 and 4 of the 4th section deserve a careful attention.

Many paramedics trained by or working in, christian institutions especially in southern states, may be able to take advantage of this book directly in English. For the many others, let us hope that translation will appear in vernacular languages to make this precious handbook actually available

to all those whom it addresses.

The authors have made a successful attempt to wirte in a clear and accessible language without compromising the necessity for health workers and health activists to master the relevant terms and facts. The presentation of the tables and graphs deserves a special mention for its clarity, careful selection, relevance and attractiveness. Many graphs may not fail to impress even illiterate readers, such as the set showing the decrease in mortality due to infectious diseases for the USA, 1900-1973, in relation to specific medical measures (p 110): one is immediately, visually convinced of the very low significance of the medical interventions in the matter. No professionally competent health activist may afford to do without this handbook. We even consider that no health worker worth the name may go without the basic knowledge imparted by this book. We wish all institutions dealing with rural health care adopt it as a basic vade-mecum for all their workers. A didactic style and the arrangement of the contents in about 35 more or less self-sufficient units, make the book easy to be used as a reference book, to be read piecemeal or utilised a la carte, according to one's daily requirements.

The authors deserve felicitations too for enlivening their technical expositions with pictures and drawings which try to give a graphic visualisation of abstract ideas and often carry the appropriate emotional import. The big size of the book (21.5 cm x 25 cm) was skillfully taken advantage of to device a well-spaced out disposition of the drawing and matter, each page being divided into two parts with short lines: this facilitates the reading and helps to grasp and memorise the matter of each paragraph.

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Dalkon Shield Battle Continues

IN late January 1986, a former Dalkon Shield user suggested that the Women's Health Information Center (WHIC) was the appropriate body in Israel to organise a campaign to notify Dalkon Shield users of their right to apply for compensation for damages. The WHIC, a project of the Israeli feminist movement, consists of small group of volunteers who for several years have provided health information and education to women through a weekly open phone line, health fairs, lectures and other activities. We knew that the manufacturer of the Shield had been required by the Court in America to notify users of their right to sue, but that the company had made little or no effort to do so here. We decided, in February, to take on the job of locating Shield users. We also decided to work with an American lawyer, who could give us information and guidance and could later represent the women we located, if they so chose.

We knew that Robins claimed to have sold the Shield in Israel, but had no idea of how many were actually inserted in Israeli women. The Ministry of Health told a reporter from a local newspaper that there were none in Israel. However, in mid-February we placed a small ad in the same newspaper and over 100 women responded immediately! Some of them definitely used the Shield; others strongly suspected that this was the IUD they had once used. Daily calls poured in, and, helped by volunteers from the Feminist Center and the Rape Crisis Center, we responded by sending out information and forms, and listening to the horrifying stories of complications women experienced with the IUD.

In February and March the WHIC sent information to the press and some ten articles were published about our campaign in Hebrew, Arabic and English newspapers. We also spoke on radio and placed another small ad in a women's magazine. Women from every corner of the country-cities, villages, kibbutzim-requested help filing claims. In April we held a meeting to give potential claimants an opportunity to meet with the lawyer, ask questions and discuss problems they were having getting medical records.

Among the claimants was one who had already verified that the IUD she received at Kalpan Hospital was indeed a Dalkon Shield, and that she had been one of 500 to get a Shield as part of an experimental program. After several weeks of negotiation with officials of the Health Ministry, Kalpan Hospital and the General Health Insurance authorities, we received permission to notify these 500 women. Unfortunately half of the addresses had been lost in the hospital archives, so we were able to write to only 250, and we lost many of these women due to lack of forwarding addresses from their previous homes.

After the April 30th deadline, Kalpan Hospital suddenly FOUND the misplaced list of the other 250 women—but now it was too late to put in claims!

Meanwhile, women continued to call us even after the April 30th deadline passed. There is a definite possibility that not all Dalkon Shield users in Israel were located, due to the limited time and money that were available to us.

When women began to request their medical records they discovered: that many files had been destroyed (they seem to save files for only 7 years here); the hospitals would not cooperate with them; details were not carefully listed—only the word IUD appeared; most private doctors had no files; and some doctors were no longer alive.

[Information from WHIC, Israel from Women's Global Network].

Reinterpreting Homoeopathy

ch v subha rao

IF homoeopathy is to take its rightful place in the health care systems of the 21st century, it must be re-interpreted from the standpoint of dialectical materialism. Samuel Hahnemann, the celebrated founder of homoeopathy, was never so dogmatic as to rule out new interpretations. He says that natural laws cannot be capitalised or kept under the seal of human authority. People may utilise natural laws and yet may not be able to understand the crux thereof. Thus Hahnemann indirectly admits that natural laws may be more fully understood by future generations. He terms as *probably correct* his explanation of the mode of action of homoeopathic medicines. He expressly states that others can form their opinions in the matter. He prepared six editions of his magnumopus *The Organon* in his lifetime and he was constantly innovating. Nearly 150 years have elapsed since the deathof Hahnemann. It is high time somebody reinterpreted homoeopathy and surveyed medical science in general in the light of subsequent developments in philosophy and science.

In his book *Principles and Art of Cure by Homoeopathy*, Herbert Roberts tried to demonstrate that homoeopathy was based on the bedrock of natural laws. More effort on those lines is required now. In the Soviet Union, philosophers and medical scientists are trying to develop modern marxist concepts of life, health and disease. Hahnemann's role in medicine may be compared to that of Hegel in philosophy. Both were philosophical idealists. The rational kernel of their teaching was enveloped by a mystical shell. Marx accepted Hegelian dialectics but rejected idealism. Similarly, it should be possible to separate homoeopathic therapeutics from its idealist shell.

During Hahnemann's lifetime (1755-1843) there were hardly any scientists who were consciously and consistently materialistic in their world-outlook. It is, therefore, not surprising that Hahnemann was deeply influenced by and deeply dissatisfatied with idealist philosophers. He was a deist and a religious free-thinker. He wrote: "The ever-beneficent Godhead animating the infinite universe dwells in us also".[1] He felt attracted by philosophy, but the philosophers and their works offered him little satisfaction. He said: "Philosophy is not only the highest of all sciences, it is also the basis and the fundamentals of all others. No science can exist without philosophy, for without its help it falls to the level of a handicraft or at any rate of a subsidiary subject. This is true above all of medicine" (Haehl).

Hahnemann's biographer Richard Haehl says: "What particular philosophic system he supported is not discernible from his writings or his letters. It seems very questionable whether he definitely accepted any special system. He should rather be regarded as an eclectic who selected from each system the best for his own view of life and the world. From his schooldays onwards he had followed Descartes, Spinoza and Leibnitz (whose systems dominated the schools of the time) and then proceeded to vitalism and to the naturalism of Schelling and Hegel. *He advanced beyond this to spiritualism* and for a time lost his way in occultism. In temperment and development, both as man and as physician, he was a strong opponent of materialism. With all his emphasis on scientific exactitude and empiric certainty as the starting point of his therapeutic reform he rejected materialism equally as an outlook on life and as a fundament of his new theory:... But, on the other hand, he took for his own purposes the basic thoughts of doubt from materialism. He took up a definitely conscious standpoint from facts of experience and rejected every philosophic speculation which did not agree with the latter. For this reason Kant was too impracticably abstract for him and not clear enough in his manner of presentation. Of Plato he complains that he is only valuable when he speaks intelligibly and expressively. His criticism of the philosophers after Kant is that they wrote 'even more mystically' than Kant, that they composed too freely in fancy and that that they had therefore not kept to the bounds of experience" (Haehl).

For Hahnemann, theory was of minor importance (Haehl). Engels, on the other hand, attaches great importance to theory. "However great one's contempt for all theoretical thought, nevertheless one cannot bring two natural facts into relation with each other, or understand the connection existing between them, without theoretical thought. The only question is whether one's thinking is correct or not, and contempt of theory is evidently the most certain way to think naturalistically, and therefore incorrectly. But, according to an old and well-known dialectical law, incorrect thinking, carried to its logical conclusion, inevitably arrives at the opposite of its point of departure. Hence, the empirical contempt for dialectics is punished by some of the most sober empiricists being led into the most barren of all superstitions, into modern spiritualism" (Engels, 1982).

Let us now turn to Hahnemann's concept of vital force. "In the healthy condition of man, the spiritual vital force (autocracy) the Dynamis that animates the material body (organism), rules with unbounded sway, and retains all parts of the organism in admirable, harmonious, vital operation as regards both sensations and functions... The material organism without the vital force is capable of no sensation, no function, no self-preservation; it derives all sensations and performs all the functions of life solely by means of the immaterial being (the vital principle) which animates the material organism in health and in disease" (Haehl).

On the concept of vital force Engels says: "If by this (vital force) is meant that the form of motion in the organic body is different from the mechanical, physical, or chemical form and contains them all sublated in itself, then it is a very lax manner of expression, and especially so because the force-presupposing transference of motion appears here as something pumped into the organism from outside, not as inherent in it and inseparable from it, and therefore this vital force has been the last refuge of all supernaturalists" (Engels, 1982). And again: "*The Organism is certainly the higher unity which within itself unites mechanics, physics, and*

chemistry into a whole (emphasis original) where the trinity can no longer be separated. In the organism, mechanical motion is effected directly by physical and chemical change, in the form of nutrition, respiration, secretion, etc., just as much as pure muscular movement." Thus it may be necessary to modify or even altogether abandon some of the concepts of Hahnemann.

All this, however, should not detract from the merits of homoeopathy which are many and solid. The patient is treated on the basis of 'totality of symptoms'. The uniqueness of each patient is recognised. Permanent cures are accomplished in the gentlest manner possible. The pills are sweet and incredibly cheap. The efficacy of homoeopathic remedies is beyond question. Indeed, allopathic treatment is said to be absolutely necessary only in a new cases. Homoeopathy provides prophylactics as it did when encephalities was taking a heavy toll of lives of children in our country.

We are chasing the mirage of Health for All by 2000 AD. In a rational world there will of course be great emphasis on prevention of disease. It will be a non-violent, nuclear-weapon-free world. It will be free from pollution. People will consume unadulterated and uncontaminated foods free from toxic food additives. There will be excellent sanitary arrangements. Everyone will get food, clothing and housing. Occupational hazards will be minimised. Consumption of narcotics, alcoholic liquors, cigarettes etc, will be drastically reduced. There will be less stress and fewer deaths due to accidents. Nowadays goods are being produced, advertised and sold without the slightest regard for their harmful effects on the consumers. The elimination of profit motive in production is a pre-condition to achieve the goal of Health for All.

If the masses are the real makers of history, it follows that the above goal cannot be reached without a people's movement. In India, progressive forces have been demanding the nationalisation of drug industry and rationalisation of drug policy. They have not met with much success. Drugs constitute one important area of multinational swindling. Our dependence on transnational drug manufactures and on drugs themselves must be reduced. Right now state aid to systems like homoeopathy, ayurveda, and unani is just nominal. It is nobody's case that the baby should be thrown away along with bathwater. The dialectical method should be applied to the facts of medical science and health care. Such a comprehensive critique will enable us to see things in proper perspective and to assign to each system the role it deserves. The quest for truth and for cures must be the motive of such an inquiry and neither passion nor prejudice nor private profit should be allowed to hinder it. The reinterpretation of homoeopathy will form part of such a critique.

Much basic research has to be done if homoeopathy is to gain wider acceptability. For instance the mode of action of homoeopathic remedies has not been satisfactorily explained so far. The materia medica can and must be enriched. Potentisation of drugs can perhaps be explained in terms of the law of transformation of quantity into quality. The law of cure 'Similia Similibus Curantur' may have something to do with the law of negation of negation. If sufficient funds and talents are pumped into homoeopathy, it may develop into the healing system *par excellence* of the future.

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ADVERSE EFFECTS

Women and the Pharmaceutical Industry

Edited by Kathleen McDonnell

Medical remedies which are inappropriate, wasteful and sometimes simply downright dangerous, overload the world. Many are targetted specifically at women. ADVERSE EFFECTS sets out to examine, in a global context, how women are frequently exploited and injured by drugs. Articles from India, the Philippines, Canada, the Netherlands and USA illustrate how women are successfully organising themselves to fight this ill-treatment and manipulation.

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Articles on EP drugs, hormone treatments, DES and mood modifiers.

Part II - PHARMACEUTICALS AND FAMILY PLANNING
Articles on Depo-Provera, the rise and fall of the IUD, and the fight to keep injectables out of India.

Part III - TAKING BACK CONTROL
Two articles examine some of the efforts being made to challenge the power of the multinational pharmaceutical industry.

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The Hungry Sparrow

The hungry sparrow
flew about in search of grain.
The grain was trapped in the wood of the grinder.
The sparrow said to the carpenter:
Brother carpenter, brother carpenter, the grain
is locked in the grinder.
What shall I eat?
How shall I cope with my hunger?
What shall I carry to another clime?

The carpenter split the grinder;
Out flew the grain.
and the sparrow after the grain.
But the wicked grain lodged in the royal
granary, guarded by a sentry.
Said the sparrow to the sentry:
Brother sentry, brother sentry, the grain
is lodged in the granary.
What shall I eat?
What shall I eat?

The sentry took the matter to the minister.
The minister to the monarch.
The monarch summoned the commander-in-chief
Who appointed a magistrate to study the case.
The magistrate read through reams of law,
and argued back and forth:
Why, in the first place, the magistrate wondered,
did the sparrow have to be hungry?
At any rate, if hungry she was,
Why did she have to pursue the grain?
The grain that of its own desire lodged
in the royal granary.

News spread rapidly.
The papers carried it end to end:
'Sparrow versus the grain' was the cry everywhere.
It was plain that
the sparrow was hungry without rhyme or reason.
Her guilt was beyond doubt.
The hungry sparrow was shot.

Gorakh Pandey
(Hindi)

[From: *Thema Book of Naxalite Poetry* edited by Sumanta Banerjee, Calcutta 1987]

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Understanding Medical Ethics

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Law, Medicine and the People

THE purpose of law, it is said, is to 'regulate' human activities in a society and the medical world concerns itself with "improvement in physical and mental health of the people and the prevention, diagnosis and treatment of illness". It is, therefore, quite natural that laws relating to the medical world need to be examined and modified/rectified from time to time in relation to their impact on the society and people they aim to regulate.

The Indian legal system and laws, in particular those related to medical practices etc., are borrowed to a great extent from the British system. It is pertinent to compare their impact on the people(s) in terms of their meaningfulness to them. It would be both cumbersome and meaningless to make a comparison of each law (related to medicine) and examine its 'regulatory impact' on the society. Besides, there are laws relating to medical practice that are only remotely concerned with the general public and are, therefore, not of consequence here. In fact it might serve to consider here the different entities and their functions and the laws pertaining to them.

Doctors and Laws

Medical practioners must 'register' before they can practice and collect fees for their advice and registration is subject to minimum standards of qualification. Under the Medical Act these responsibilities are given to respective Medical Councils. These Medical Councils are also empowered by the act to cancel the registration of a medical practitioner from the Medical Register if there is "serious professional misconduct" and there is a Medical Disciplinary Committee set up for this purpose. In UK several registrations have been erased either because it is "necessary for the protection of members of the public or in the best interest of the person suspended." And there is usually a very meaningful debate on the issue in medical journals, which itself acts as a deterrent for others. Such erasure of registration of medical practioner is almost absent so far as the Medical Council of India is concerned. However, the absence of erasure need not be construed to mean that things are above board in India. Adultery, improper association, negligence, and advertising are some of the issues on which registrations can be erased and many of our practitioners violate at least some of these and yet the MCI does not seem to be stirred enough to take action.

To take another example, according to the Act: "Nothing in the act shall extend or be construed to extend to prejudice or in any way affect the lawful occupation, trade or business of chemists and druggist and dentist or the rights, privileges or employment of duly licensed apothecaries so far as they extend to selling, compounding or dispensing medicines". Yet it is almost a universal practice for general practitioners in India to dispense drugs and charge for the same. Neither the MCI not the state have taken any action on this.

Further, "It is the duty of every registered practioner to bring to bear upon all his professional activities that standard of skill and knowledge which is to be expected of a practitioner of his experience and status and of comparable standing to him. It is also his duty to exercise reasonable care in his treatment of a patient. If the failure to exercise the necessary degree of skill or care results in injury to the patient, he will have a right of action for damages. Whether reasonable skill or care has been exercised in a particular case is a matter which has to be considered in relation to the facts of each case." No branch of the law affects the practice of medicine more strongly than the law of tort (civil wrong) under which negligence is perhaps the most talked about.

The glycerol tragedy in the J J Group of Hospitals has highlighted the issue of negligence. There can be no doubt about the fact that there was negligence on the part of everyone including the doctors of the hospital and yet is it not strange that the MCI has chosen to remain silent on the issue? It is in circumstances such as these where the ethics and rules enforcing bodies such as the MCI refrain from acting that the absence of people's participation in such matters become evident. What does one do when professional bodies fail to act?

Yet another example is that of the Bhopal disaster where the gas-affected people were 'denied' the antidote sodium thiosulfate for reasons that are still unclear today. Doctors' obligation, the Council's obligation and the state's obligation are evident by their absence.

Another issue that needs to be discussed here is the one related to informed consent. "A doctor has no right to do anything to a patient without his consent except in the case of emergency when he must exercise his discretion. The securing of a signature to a consent should not be allowed to become an end in itself. The most important aspect of any procedure must always be the duty to explain to the patient or relative the nature and the purpose of the proposed operation and thus to obtain a fully informed consent. In our country this should be even more important (though admittedly also more difficult) since there is so much illiteracy and lack of information. But it is common knowledge (though difficult to prove) that informed consent is reduced to a mere signature-obtaining exercise. The matter becomes even more serious when, to meet the family planning targets, healthy women and men are subjected to sterilisation operations.

Drugs are another entity subject to standards. Our drug laws are very similar to the British ones. An additional regulation in India is the Drug Price Control Order, which sets norms for prices of drugs. Despite

this, unlike in UK, the bulk of 40,000 to 60,000 formulations put into the market by over 9,000 manufacturers, are irrational, useless or even hazardous in some cases. A significant number of them are sub-standard. Doctors' prescriptions are often found to contain superfluous and unnecessary drug formulations, evidently to favour the drug companies' representatives. One report indicates that in Tanzania, there is one drug company representative for every four doctors (see Mukarram Bhagat's *Aspects of Drug Industry in India'*). In India, with 9,000 drug companies, the situation is very much the same. (In UK, the ratio is 1:20). Clearly the Indian patient pays a great deal more for medicine and gets much less value for it. Laws and the legal system need to take cognisance of this and ensure regulatory mechanisms to remedy this situation. What is more, the Bangladesh drug policy has already unequivocally demonstrated that the expenditure on medicine can be reduced and more 'value' made available to the patients and has also proved to be sustainable.

Health Services and Law

If there is similarity in the British and Indian laws in respect of drugs and registrations of doctors, the hospital services policy is different. In UK, under the National Health Services Act 1946, comprehensive health services are made available to the people. This includes a scheme of social insurance, and covers an overwhelming populace of the country. In India there is no comparable legislation and the state health sector incorporates the medical services including CGSS and ESIS. Indeed there are public hospitals and dispensaries which are supposed to deliver medical services free or at very nominal fees but in effect are found wanting. There are no minimal standards clearly specified for commissioning of hospitals or dispensaries and it is not unusual to find Primary Health Centres being reduced to the structure of bricks and mortar. Hence even the Health Policy promises to have at least one PHC for every 30,000 population, this goal is not attained and at times even when there is a PHC existing, it could hardly be functioning. Comically hotels and restaurants of some cities in India are graded according to the services they make available but not the hospitals.

The quality and quantity of health/medical care made available to the people is hopelessly inadequate and with the paucity of resources it is clearly evident that radical and pragmatic legislative and policy approaches are necessary. Strangely it is the countries where health/medical care is of a high standard, which are clamouring for 'radical' changes in their system to be even more effective e g, in March 1987, the British Medical Association recommended that the government introduce a 'no-fault' compensation scheme based on the Swedish model. Diana Brahams (*Lancet*, January 2/9, 1986, p 43) explains "In my view the term 'no fault' is inaccurate; in truth the scheme provides compensation without apportioning blame for unexpected adverse results arising from medical treatment in which error was an important factor. A failure to act, or to act in time, may also be compensable."

It is interesting to compare medical malpractice perspective in US and UK (where consumer awareness is high) before one takes stock of the situation in India. In the United States (as everyone knows) the suits pertaining to medical malpractice are far more frequent than those in United Kingdom. Lois Quam *et al* of the Centre for Socio-Legal Studies, Oxford, have reported in an excellent study in this respect (*BMJ*, vol 294, 1987, pp 1529-1532 and vol 294, 1987 pp 1597-1600) that "the reasons for this are related to American health care and social security systems. "Relative to United Kingdom, there are fewer barriers of access to the courts." "The differences between the National Health Service and American health services are gross and well recognised. The close relation between the cash nexus of private practice and high rates of litigation in the USA is less understood." Patients who are paid directly for their health care, through a mixture of insurance premiums and contributions out of pocket, seem more likely to feel aggrieved when treatment fails. Moreover, litigation is fuelled by the sheer cost of extra care after an iatrogenic injury or treatment.

In principle the National Health Service (UK) seems likely to reduce claims in at least four ways: There is no direct cost to the patient for extra medical care to remedy injury; access to care is guaranteed throughout life; there is no direct financial relation between doctors and patients; and the system of referrals restrains specialists while encouraging loyality between patients and their general practioners."

It is important to note that in both the countries, there is adequate provision (monetary or by services) for medical and nursing care for the remainder of life. In our country medical and health care is grossly inadequate and despite a number of medical malpractices there is hardly any litigation or effort to redress injustice caused. Even when there is litigation, the odds are heavily pitted against the patient in more ways than one: (i) there is a strong nexus amongst doctors to 'protect' one another in the event of a case in the court; (ii) patient record is not available to the patient (unlike in Sweden) for proper presentation of the case; (iii) and lastly the cases drag on (very often) for such an extraordinary length of time that most people find it beyond their means to 'sustain' litigation. Although the Legal Services Authority Bill has been passed under which free legal services are made a statutory right the bill has grave limitations and is self-defeating. That it does not provide for mass participation and nor does it attempt to provide relief beyond the monetary (see Krishna Iyer's Comment in *From the Lawyer's Collective*, November 1987). Thus, legal provisions cannot be an end in themselves. While legislation provides for the possibility of ensuring justice without prejudice both its content and form are limited to the socio-political context of particular societies. Its extension and implementation is a consequence of people's movements.

Anil Pilgaokar

Medical Malpractices and Law

mihir desai

Although medical negligence claims are an off-shoot of industrial capitalism, given the circumstances, the existing negligence law can serve a useful purpose in imposing a certain accountability on the part of the doctors and providing redressall for injuries. The legislation should thus be seen not just as a reflection of bourgeois ideology but also as a bourgeois democratic right which requires to be extended and expanded.

MEDICAL negligence litigation has in the past too decades risen sharply in England and the US. Especially in the US it has reached such a stage that a strong and active lobby has come up against this. It has also led to the increasing practice of 'defensive medicine' and a rise in doctors' insurance rates. In India, of course, there is no corresponding trend. The Indian law on this aspect, however, slavishly follows the British and the American law. These trends therefore become very relevant in India not only for gauging the potentialities of this type of litigation in India but also to highlight the positive and negative aspects of this system. Though the medical systems in the US and in UK are very different—complete privatisation in the one while state health services in the another—the law is virtually identical. These trends cannot be viewed in a vacuum but only in the context of the socio-economic aspects of medical-malpractice liability and the reasons why its development has been stagnant in India.

Medical negligence litigation is a response to the following types of questions.

What are the rights of patients vis-a-vis the doctors and hospital?

What if the doctor wrongly diagnoses a disease?

What is the level of competence expected of a doctor?

Does a doctor have to take the consent of the patient before an operation?

If many doctors have handled a patient which of them is ultimately liable?

The common issue in all this is the patient's allegation that the doctor has been negligent.

Negligence and Torts

Medical negligence is a branch of the law of negligence which in turn is a branch of the law of Torts. The Tort law is not based on any act of Parliament. It is mainly a judge-made law developing over the years through changing judicial decisions. It is not possible to define Torts but broadly speaking tort is a wrong done by one person to another for which the law provides a remedy. The idea is to monetarily compensate the victim rather than punish the offender—as would be the case in criminal law. It includes disparate events such as a car accident, injuries due to emission of poisonous gas, doctor's negligence causing death of a patient, defamation of a person, compensation for injuries suffered by a wife at the hands of her husband, etc. The motives of the offender are not very relevant. The focus is on the victim.

A person is said to be negligent when s/he acts without due care in regard to the harmful consequences of his/her action. When we say that a person has been negligent we are saying that s/he acted in a way that s/he ought not to have acted. This assumes that we know how s/he ought to have acted. The way in which we consider that s/he ought to have acted is the norm or standard which entitles us to condemn the person for being negligent when s/he fails to comply with the standard.

The tort of negligence is made up of three components:

(1) A duty or obligation recognised by the law requiring the person to comply with certain standards of conduct for the protection of others against unreasonable risks. Initially charitable hospitals used to claim that they could not be held negligent as they had no duty to take care of patients since they were not charging them. Now of course the courts always disregard such defences.

(2) A failure on the part of the person to conform to the standard required—what is known as a 'breach of duty'.

(3) A reasonably close causal connection between the conduct and the resulting injuries.

(4) Actual loss or damage resulting to the other.

So, negligence ultimately is a matter of risk—that is to say, of recognisable danger or injury. Persons are supposed to meet with certain standards of conduct. This standard is supposedly based on what society demands of its members, rather than upon the actor's personal morality. A failure to conform to the standard is negligence even if it is due to clumsiness, forgetful nature, an excitable temperment or even sheer ignorance. In other words, the state requires of a person not to be awkward or a fool.

In negligence, the actor does not desire to bring about the consequences which follow nor does s/he know that they are certain to occur, or believe that they will. There is merely a risk of such consequences sufficiently great for a 'reasonable person' in his/her position to anticipate them and to guard against them. Risk can be defined as a danger, which is apparent or should be apparent, to one in the position of the actor.

Nearly all human acts, of course, carry some recognisable or remote possibility of harm to another. No person so much rides a horse without some chance of a runaway nor does any surgeon perform an operation without some chance of himself suffering a heart attack and messing up the operation. These are of course, 'unavoidable accidents' for which there is no liability. As the gravity of the possible harm increases, the apparent likelihood of its occurrence needs be correspondingly less to generate a duty of precaution. Thus the standard of conduct which is the basis of the law of negligence is normally determined upon a risk-benefit form of analysis by balancing the risk in the light of the 'social value' of the interest threatened, and the probability and the extent of the harm, against the value of the interest which the actor is seeking to protect and the expedience of the course pursued.

Professional Negligence

Uptil now what we have talked about is the minimum standard below which the individual is not permitted to fall. But if a person in fact has knowledge, skill or even intelligence superior to that of the ordinary person, the law will demand of that person's conduct be consistent with it. Professional persons are not only required to exercise reasonable care in what they do, but also a standard minimum of special knowledge and ability.

Let us look at how in practical situations the law applies to doctors. A doctor may, of course, contract to cure a patient, or to accomplish a particular result, in which case he may be liable for breach of contract. This is not, however, what generally happens. In the absence of such an express agreement, the doctor does not warrant or insure a correct diagnosis or a successful course of treatment and a doctor will not be liable for an honest mistake of judgment where the proper course is open to reasonable doubt. But by undertaking to render medical services, even though gratuitously, a doctor will evidently be understood to hold himself out as having standard professional skill and knowledge. The formula which is used is that the doctor must have and use the knowledge, skill and care ordinarily possessed and employed by members of the profession in good standing, and a doctor will be liable if harm results because he does not have them. Sometimes this is called the skill of the 'average' member of the profession, but this is clearly misleading. Since only those in good professional standing are to be considered; and of this it is not the middle but the minimum common skill which is to be looked to. If the doctor claims to have greater skill than this, as when the doctor holds himself out as a specialist, the standard has to be modified accordingly.

Of course, there are areas in which even experts differ. Where there are different schools of medical thought and alternative methods of acceptable treatment, it is held that the dispute cannot be settled by the law and the doctor is entitled to be judged according to the facts of the school the doctor prefers to follow. This does not mean that any quack or a crackpot can let himself be known as a 'school' and so apply his individual ideas without liability. A 'school' must be a recognised one within definite principles and it must be the line of thought of a respectable minority of the profession. In addition there are minimum requirements of skill and knowledge, which any one who holds himself out as competent to treat human ailments is required to have, regardless of his personal views on medical subjects.

Since judges/juries are essentially lay people, they are held to be normally incompetent to pass judgment on questions of medical science or technique and so only in certain types of cases findings of negligence are given in the absence of expert medical evidence. Normal reluctance of doctors to testify against co-professionals came in the way in US and UK and is likely to be a big hurdle even in India. Now of course, in US and UK more and more doctors came forward to give evidence on behalf of patients. Also, where the matter is regarded as within common knowledge of the lay people, as when the surgeon saws off the wrong leg or where injury is caused to a part of the body not within the operative field, the judges often infer negligence without expert evidence.

The cumulative effect of all this is that the standard of conduct becomes one of 'good medical practice' i e, what is customary and usual in the profession.

This, of course, gives medical profession a privilege denied to others, of setting their own legal standards of conduct merely by adopting their own practices, except in certain cases like in the cases of sponges left in the patient's abdomen after an operation where the task of keeping track of them has been delegated by the surgeon to a nurse. Though this was and is still a routine practice, the doctor was found to be negligent.

Some Specific Trends

In one of the earliest decided cases, in 1767, an English court felt that the surgeon was liable as he had acted contrary to the known rule and usage of surgeons. What happens if the patient is injured because of the omission to carry out an available test, which is not generally conducted by doctors for such patients? In 1974 an American Appeal Court was faced with this issue. Barbara Helling suffered from primary open angle glaucoma. This is a condition of eye where there is an interference in which nourishing fluids flow out of the eye. There can be a resultant loss of vision. The disease has few symptoms and in the absence of 'pressure test', is often undetected till irreversible damage is done.

Helling contacted two opthamologists—Carey and Laughlin—at that time believing that she was suffering from myopia (shortsightedness). From 1959 to 1968 she consulted these doctors, who fitted contact lenses and believed that irritation caused in her eyes was because of complications associated with the lenses. For the first time in 1968 they tested the patient's eye pressure and field of vision. This indicated that she had glaucoma. By that time the patient, who was 32, had essentially lost her peripheral vision and her central vision was reduced. She filed a case for damages.

The doctors argued and proved that the standard of the profession did not require the giving of routine pressure test to persons under the age of 40 as the incidence of glaucoma is 1 out 25,000 persons under the age of 40. They argued that since they had acted in accordance with the standard practice of the profession they had acted with reasonable prudence. The court, however disregarded this defence. The judges held: "In most cases reasonable prudence is in fact common prudence, but strictly it is never its measure. A whole calling may have unduly lagged in the adoption of new and available devices. Courts must in the end say what is required: there are precautions so imperative that even their universal disregard will not excuse their omission."

The court felt that despite the fact that a pressure test was not used generally by opthalmologists, the doctors ought to have used it. Barbara received compensation.

The importance of the case lies in the fact that the standard of care required of the doctors is widened. Normally of course the standard adopted in the profession would be acceptable as the standard required of each doctor. But this case for the first time obliged doctors to conduct certain known tests even if they were not being conducted in the profession generally.

This case created a storm in the USA. Attempts were made through courts and legislature to change the law laid down by the case, but ultimately they have proved to be futile. However, the application of this case is only confined to

narrow field of possibilities and that of 'general practice' within profession is still widely applied.

Hospital Liability

A question of immense significance is whether a hospital can be made to pay for negligence of doctors, nurses and other staff. This is an issue of great importance in India. Many times it is not possible to point out the person whose negligence led to injury. Take the example of a patient who is given saline by a number of doctors and nurses from time to time. A particular needle may not be sterilised causing gangrene. It is not possible to know who exactly was negligent. Can one then sue the hospital? Or many times it may so happen that the negligent staff member does not have means to pay. Can one sue the hospital and recover?

The most important American case on this point was Darling vs Charleston Community Memorial Hospital decided in 1966. In November 1960, Darling, 18 years old, broke his leg while playing college football. He was taken to emergency ward of Charleston Hospital and treated by Dr. Meroander, who applied traction and placed the leg in a plaster cast. Soon after, Darling was in great pain and his toes which protruded from the cast, became swollen and dark in colour. His condition kept on worsening and ultimately the leg had to be amputated.

As to the question whether there was negligence or not, the court held that the nurses had not checked sufficiently, and as frequently as necessary, the blood circulation in the leg. Skilled nurses would have promptly recognised the condition, and would have known that they would have become irreversible in a matter of hours.

The question was whether the hospital was liable. The judges held: "The conception that the hospital does not undertake to treat the patient, does not undertake to act through its doctors and patients, but undertakes instead simply to procure them upon their own responsibility, no longer reflects the fact. The present day hospitals, as their manner of operation plainly demonstrates, do far more than furnish facilities for treatment. They regularly employ on a salary basis a large staff of physicians, nurses and interns, as well as administrative and manual workers, and they charge patients for medical care and treatment, collecting for such services, if necessary, by legal action. Certainly the person who avails himself of hospital facilities expects that the hospital will attempt to cure him not that the nurses and other employees will act on their own responsibility". The hospital was made to pay damages.

The Darling case became a landmark decision in medical malpractice claims as it places a direct responsibility on the hospital for the maintenance of an acceptable standard of care for patients. Subseqently, the scope of even this decision has been widened and charitable hospitals have also been held to be responsible.

Is the hospital liable if the patient's infection is traced to blood products supplied during his operation? In a 1970 Illinois state case, the hospital was held to be strictly liable for supplying contaminated blood. A hospital will also be liable for negligence of any honorary doctors or specialists it calls but not for private doctors called by the patients themselves. Hospitals, in same case have been held guilty even when its employees have acted in direct contradiction of the hospitals' instructions or prohibitions causing injury.

Strict Locality Rule

The standard of care expected of doctors is generally speaking that prevalent in the profession. They are not only required to perform tests generally performed, but also to be informed sufficiently about the new developments in the field.

One of the most debated issues in the US and UK arose out of a presumption that the rural and small time practitioners would be less adequately informed and equipped than their big city colleagues. To adjust to this the courts came out with a theory that there could not be any national standard of care but the standard varies from locality to locality. They applied the strict locality rule which meant that the standard of care expected of doctors depended on the general standard of that particular locality. However, in recent times this rule has been given up and national standard applied on the basis that "new techniques and discoveries are available to all doctors within a short period of time through medical journals, closed circuit television, special radio networks for doctors, tape recorded digests of medical literature and current correspondence course".

This situation is prevalent only in developed capitalist countries. In backward countries like India with uneven development, it is very likely that when cases come up, the strict locality rule will be applied.

Res Ipsa-Loquitor

Ultimately it is for the patient to prove that it was negligence which caused her/his injuries. It many times becomes difficult to do so for varied reasons like information hiding by the doctors, etc. What happens in some cases, however, is that after presenting all evidence, though directly negligence is not proved, it is still pretty obvious that the patient could not have suffered injuries except through negligence. In such cases the legal doctrine of *'Res Ipsa Loquitor'* or 'the thing speaks for itself' is applied. Negligence is presumed to have been proved and the doctors held liable.

In a case decided in an American court in 1975, a patient Anderson was admitted to hospital for a back operation. During the operation, the tip or cup of a forcep like instrument (angulated rongekur) broke off while it was being manipulated in the patient's spinal chord. It could not be recovered and the patient suffered permanent injury. Anderson sued the doctor, the hospital, the manufacturer and the distributor. Each tried to push the blame on the other and it could not be proved as to whose negligence had led to this complication. It was not established whether the rongekur broke because of manufacturing defect, certain problems during transit or due to the doctor's negligence. If it was merely a case of determining negligence from amongst the hospital staff and doctors then even without establishing who exactly was negligent, the hospital could have been saddled with damages. Here of course, the hospital was saying that it was not the neglect of staff or doctors which caused the rongekur to break but that of the manufacturer or dealer.

It was just not possible to establish what caused the breakage. The court, however, came to the rescue of the patient and observed, "In the type of case we consider here, where an unconscious or helpless patient suffers an admitted mishap not reasonably foreseeable and unrelated to the

scope of surgery (such as cases in which foreign objects are left in the body of the patient), those who had custody of the patient, and who owe him a duty of care as to medical treatment, or not to furnish a defective instrument for use in such treatment can be called to account for their default. They must prove their unculpability or else risk liabilities for injuries suffered". All of them were held jointly liable.

The doctrine of *Res Ipsa Loquitor* has been extensively used in 'swab cases' where after the operation, an instrument is left inside the patient's body. It has also been used for other types of cases—for instance in the Canadian case of MacDonald vs York County Hospital Corporation, the patient was admitted for treatment of fractured ankle and left with an amputated leg. Heavy damages were awarded to MacDonald despite there being no direct proof of negligence.

Misdiagnosis

A liability will be imposed when the doctor fails to conduct tests which a competent practitioner would have considered appropriate or when the doctor fails to diagnose a condition which would have been spotted by a competent practitioner. In Langley's case the patient had returned from East Africa shortly before the development of symptoms. The general practitioner failed to diagnose malaria and this was considered as negligence. Similarly in Tuffil's case the patient had spent many years in a tropical climate, the doctor failed to diagnose ameobic dysentry which proved fatal. This failure to diagnose was held to be negligence.

A question which arises is whether a new doctor would have the same responsibility as a seasoned doctor? The law makes no distinction in this regard. In Wilsher vs Essex Area Health Authority, the patient had been born prematurely and had been admitted to a special unit where extra oxygen was administered to him over a long period. His sight was badly affected as a result of a junior doctor's failure to monitor properly the supply of oxygen. The hospital was held to be liable.

In many cases it is a part of the duty of the doctors and nurses to predict that the patients may damage themselves as a result of their medical condition. For instance in one case the patient had been admitted to hospital after a drug overdose. Although he had known suicidal tendencies he was not kept under constant observation and he climbed on the hospital roof and fell incurring injuries, while the two nurses on duty were out of the ward. He was awarded damages of £ 19,000.

Informed Consent

One of the most rapidly growing medical malpractice litigation is in the areas of 'informed consent'. This concerns the duty of physician or surgeon to inform the patients of the risk involved in treatment or surgery.

The principle behind this is the classical bourgeois democratic ideal of individual autonomy, i e, that every person has a right to determine what will be done to her own body and the right to have bodily integrity protected against invasion by others. Only in certain narrowly defined circumstances can this integrity be compromised without the individual's consent.

Surgeons and other doctors have to provide their patients sufficient information to permit the patient to make an informed and intelligent decision on whether to submit to a proposed course of treatment or surgery. So, even if a procedure is skillfully performed, the doctor may nevertheless be liable for an adverse consequence about which the patient was not adequately informed. Of course, the patient has to show a causal link between the non-disclosure and her injury by proving that she would not have undergone the treatment if she had known the risk of harm that in fact occurred. The courts believe that all patients in retrospect would say this and so even here they have evolved the criteria of 'reasonable patient', i e, whether this hypothetical patient in the actual patient's place would have withheld consent to the treatment had the material risks been disclosed. This, of course, is problematic because the individual patient's characteristics are totally ignored. Slowly, the courts in US are trying to incorporate even this subjective factor.

What risks have to be disclosed? All the material risks, i e, the nature of pertinent ailment, the risks of proposed treatment, including the risks of failing to undergo treatment, have to be disclosed. Even if the risk is a remote possibility it should be disclosed. However, unexpected risks may not be communicated. For instance, in an American case a patient suffered cardiac arrest during amniocentesis. There were no prior documented cases like this. The doctor was not held to be negligent.

Even otherwise there are cases where the risk disclosure may be precluded by an emergency situation or the patient's incapacity. In fact in the US all states have passed what are called 'Good Samaritan Laws' aimed at protecting doctors giving emergency roadside treatment.

The disputed issue is whether for the benefit of the patient, the doctor can withhold information from them. This happens many times when doctors feel that the patient will suffer mental shock or nervous breakdown if the risk is communicated. Such withholding is called 'theraupeutic privileges'. But there is another school which believes that all information should be disclosed so that the patient can make up her/his mind in the light of all the circumstances. The courts are divided in this point.

A problem which has not arisen in the western countries but which can arise in India is if the patient is conscious and does not consent to a treatment which is necessary to save her/his life. Can forcible treatment be justified? In most of the western countries suicide is no longer a crime and so doctors cannot forcibly treat anyone. In India, of course, this question is likely to cause some problems.

The case of minors also raises a perplexing problem. Since minors are considered by law incapable of giving consent the parents' consent has to be obtained. But what happens if a minor who is of understanding age gives instruction contrary to that of the parents? In one English case, a school girl aged 15 wanted an abortion but the parents refused to grant permission. The court held that the girl was entitled to abortion as she was capable of understanding its implications.

Nowadays, at least before surgery, a patient is normally required to sign a consent form. But the patient can still prove

that no consent or informed consent was taken and the doctor will then be liable to pay damages.

Indian Cases

In spite of making a detailed survey, the writer could find only three reported cases on medical negligence in India.

(1) The first case was decided by the Lahore High Court in 1935. R N Rao, a lawyer, suffered from high fever and sores on his face. Dr Whitamore, the Civil Surgeon, treated him. He diagnosed the disease as syphillis and gave injection of Sulphatab. Later Dr Rao suffered from gangrene and had to have his fingers amputated. His eyesight was affected and he lost his strength. He never had any syphyllis and he was informed that he had contacted peripheral nueritis because of a mistaken injection of arsenic.

The court, however, did not find the doctor guilty. The reason given was that though the diagnosis was wrong specific carelessness was not proved. The court adopted a reasoning which would be totally unacceptable today. It did not go into the question as to whether the doctor had performed the required tests before concluding that there was syphllis. Neither did it try to a answer the question as to what caused the gangrene.

(2) The second case was one decided by the Supreme Court in 1969. Anand met with an accident on the beach at Palshet in Maharashtra which resulted in the fracture of the femur of his left leg. The only treatment the local physician gave was to tie wooden planks on his legs for immobilisation. The follwing day he advised removing Anand to Poona for treatment. He also substituted splints for the planks. After that, in a taxi, Anand was shifted to Poona. Dr Joshi got him screened and found that he needed pin traction. He was then taken to Dr Joshi's hospital. Dr Joshi asked his assistant to give Anand two injections of morphia and hyoscine HB at ½ hour interval. Dr Irani gave only one injection. Anand was then taken to the X-ray room, and after taking two X-rays removed to the operation room. After about ½ hour when the treatment was over, he was shifted to the room he was allotted. On an assurance given by Dr Joshi that Anand would be out of the effect of morphia in 1½ hours, Anand's father went back to his village. Anand's mother remained with him. After about an hour she found that Anand was having difficulty in breathing and was coughing. The doctors were called, Dr Irani, Dr Joshi's assistant gave emergency treatment upto 9.00 pm when the boy died. Dr Joshi issued a certificate saying that Anand had died of fat embolism.

Dr Joshi was sued. Anand's father contended that Dr Joshi did not perform the essential preliminary examination of the boy before starting his treatment and injecting morphia. It was also alleged that while putting the leg in plaster manual traction was used, using excessive force with the help of three men though such traction is never done under morphia alone, but under proper general anaesthesia. Dr Joshi in his reply denied the allegations by saying th. ' no general ahaesthesia was given considering the exhausted condition of patient. It was decided to immobilise the fractured femur by plaster of Paris bandage, and no excessive force was used. However, on evidence the court felt that Dr Joshi was negligent. It came to the conclusion that it was due to shock resulting from reduction of fracture attempted without taking the elementary precaution of giving anaesthetic to the patient.

Speaking about the duties of doctors the court repeated the British and American law saying, "The duties which a doctor owes to his patient are clear. A person who holds himself out ready to give medical advice and treatment impliedly undertakes that he is possessed of skill and knowledge for the purpose. Such a person when consulted by a patient owes him certain duties, viz, a duty of care in deciding whether to undertake the case, a duty of care in deciding what treatment to give or a duty of care in the administration of that treatment. A breach of any of these duties gives a right of action for negligence to the patient".

(3) The third case was decided by the Bombay High Court in 1975. This case reads like a doctor's apology. Philips India had appointed a doctor to give treatment to the employees. One employee contacted smallpox and died. The doctor had treated him for veneral disease. The court felt that there was a genuine error of judgment and since the particular variety of smallpox was fatal, the doctor anyway could not have done much. The problem with the case is not that it exonerated the doctor, especially considering the peculiar facts of the case, but the extent to which it sought to protect doctors. The court expressed the view that negligence for doctors should be interpreted much more narrowly than negligence of others, i e, the doctor has to be placed on a high pedestal and held to be negligent only if it is totally unavoidable.

Of course, this case is not likely to have any impact on subsequent cases, but still it shows the attitude of the judges. The important point decided by this case, however, was in holding that if the doctor had been proved to be negligent, the company which employed him would also automatically be negligent.

All the three cases relied only on English law books—by of course picking and choosing what suited the court's conveniance.

Politics of Torts

A proper understanding of the rise of 'negligence law' requires an analysis of the development and rise of the Tort Law. An extensive application of tort law is found only in developed capitalist countries. Developments at similar scale cannot be expected in third world countries. Let us therefore look at the causes which gave rise to tort law in developed capitalist countries.

In the earlier period, law was largely preoccupied with personal status, control over resources (primarily land) and the development of contractual relations (mercantile capitalism). Industrial capitalism transformed the entire social structure, engendering urbanisation which enormously increased the frequency of interaction among strangers. Important, because unlike aquaintances or intimates strangers would have less incentive to exercise care not to injure one another inadvertently and would find it more difficult to resolve the differences when injury occurred. At the same time interaction between friends and intimates became progressively limited—ultimately confined to the nuclear family. Intimates commit most intentional torts. But within the nuclear family they are rarely resolved by the legal system, (a) because they would destroy the relationship (b) the persons committing torts are sufficiently powerful.

Industrialisation gave capitalists the power to effect extensive damages first through domination of unprecedented

amount of physical force (factories, railways, etc) and now through toxic chemicals. Concentration of capital and mass production increased the number of workers, consumers and others who might be harmed by capitalists' indifference or miscalculation.

Capitalism also shapes the experience of injury. It must create a proletariat which must sell its labour for wages to live. It simultaneously destroys the obligation of mutual support outside the nuclear family and pays those within it who are gainfully employed at a level of wages too low to support non-production members. As inability to work becomes tantamount to destitution or dependence upon charity, the core of damages is compensation for loss of earning capacity.

Second, capitalists, middle classes and even industrial workers acquire consumer goods which require protection against inadevertent destruction.

Third, family is no longer able to care for injury or illness, partly as members must seek employment outside and partly because care itself is commodified and monopolised by the emergent medical profession. As the monopoly allows professionals to command high fees, injuries 'cost' a great deal more.

Finally, commodity form is progressively extended to non-productive experience.

Capitalist tort law exploits and alienates the victims in ways parallel to exploitation and alienation of labour. In pre-capitalist society, injury like work creates use value, it elicits cure from intimates who are motivated by concern and promotes demand for apology backed by threat of retribution. The capitalist state which asserts its monopoly of force to obstruct the latter response also creates a market for injuries in torts and legal system. It separates through the legal proffession tort victims from means of redressing their wrongs and medical profession disabled victims and intimates from caring for the ill. In each instance, a faction of the ruling class mobilises the power of the state in its own interests to protect the monopoly of expertise of lawyers and physicians. The lawyer then combines legal expertise with the victim's injury (as the capitalist combines capital with the workers' labour) to produce a tort (a commodity) that has exchange value both in the state-created market (the court) and in the dependent markets (negotiated settlements).

As capitalists have to maximise profit in a competitive market, they must sacrifice health and safety of others. Another reason why capitalism fosters injury is that it must expand its market and increase consumption; torts contribute to it just like planned obsolescence and warfare.

Tort law, following legal liberalism, eliminated formal legal discrimination. So, with its development discrimination between patients who are victims of charitable hospitals and those of non-charitable hospitals, etc, were eliminated. But it could not and cannot remove certain deeper inequalities.

First, of course, the inequality in the incidence of injury and illness: capitalists and professionals are subjected to totally different hazards than those suffered by workers at the work place or women at home. The rich can avail of the best medical facilities, equipment and medicines, not so the poor.

Secondly, the class and gender will affect the extent to which and the way in which the experience of injury is transformed into a claim for legal redress, the sense of entitlement to physical, mental and emotional well-being (women only recently began to legally resist abuse by their husbands, workers are only now coming to view hazards at work place as a negotiable demand), the feeling of competence to assess a claim, the capacity to mobilise legal process, ability to overcome delay, etc.

Third, the law also discriminates in the availability and generosity of the remedies it offers, the biggest difference being between tort damages and other compensation systems. An industrial worker is far more likely to be injured at work than a person from another occupational category: such injuries are relegated to workmen's compensation, which pays only a fraction of tort damages and rejects altogether certain tort categories. Other oppressed categories—women, children, dalits, religious minorities—are also excluded from tort recovery. They are most frequently the victims of violent crimes and other social crimes whose assailants are either unidentifiable, unavailable, financially irresponsible or simply too powerful. Women and children injured by relatives are left without any remedy.

Another type of discrimination is internal to the tort system. Pecuniary damages are paid on the basis of income of the person. Even the damages for pain and suffering are often expressed as multiples of pecuniary damages. So a poor person will get much less damages than a rich person. Women will get much less than men.

Production of Illness

Capitalist tort law systematically encourages unsafety. The dynamic of capitalism—the pursuit of profit impels the enterprise to endanger the workers, its employees and those who inhabit the environment it pollutes. As the cost of safety reduces profits a capitalist must be as unsafe as he can get away with being.

Apparently the Tort law curbs these destructive tendencies through the threats of damages. But this is not what actually happens.

First, compensation is paid on the basis of the status of the victim not of the offender—the doctor for instance.

Second, the insurance mechanism goes a long way in virtually nullifying the burden on the offender.

Third, as seen above, due to the discriminatory aspect of Tort law many injuries and victims are excluded from its purview.

In fact Tort law motivates the entreprenuers and the professionals to seek to evade the consequences of carelessness not to enhance safety. Their response to the threat to tort liability is to strive to externalise accident costs by concealing information. For instance, the market deterrence, by mandating the payment of money damages, subverts collective efforts to exert control over safety—damages are paid only for an injury caused by the offender's act. This means that unsafe conduct causing no injury is not deterred and that the legal attention is focussed on the temporarily delineated act of an individual rather than on the ongoing activity of a collectivity. Capitalist Tort law, like capitalist medicine, is obsessed with individual care at the expense of collective prevention because capitalism creates a market only for the former.

In fact the medical profession is not even interested in curing patients, only in 'treating' as many as possible. Also the costs of damages are externalised by increased professional

fees and insurance. In England, various Medical Defence Societies have been established. It there is a successful claim involving negligence of a hospital employee, the amount will be shared by the authority and society. As regards nurses, the Royal College of Nursing holds an insurance policy, idemnifying every member. So, ultimately the costs are passed on to citizens.

The Tort law is significant for the reproduction of bourgeois ideology. The fault concept upon which the law was built reinforces a central element of bourgeois ideology, individualism. Predicating liability upon the offender's fault and denying recovery because of the victim's fault perfectly express the bourgeois belief that each person controls his or her own fate.

Tort law offers symbolic support for inequality—by compensating owners for property damage it upholds the notion of private property and its concomitant, i e, the person's worth as a tort plaintiff is proportional to the value of the property he owns.

Also, by relegating injured employees to worker's compensation, which is limited to a fraction of the lost wages, the law treats workers like pure labour value, implicitly denying that they undergo the pain and suffering for which tort victims are given compensation.

Finally, Tort law assumes that for every pain suffered there is some equivalent pain which will erase it, a pleasure that can be bought with money and, therefore, the judges must simulate a market in sadomasochism by asking themselves what they would charge to undergo the victim's misfortune.

Also the Tort law treats all relationships as forms of prostitution—the semblance of love exchanged for money: Tort law thus generalises the feminist critique of marriage. Just as society pays 'pain and suffering' damages to the injured victim who is shunned (so s/he can purchase the commodified care and companionship that will no longer be volunteered out of love and obligation), so it pays damages to those who loved him, compensating them for their lost 'investment' in the relationship (so that they can invest in other human capital).

The Socialist Approach

The primary concern of a socialist alternative should be to ensure that those at risk regain control over the threat of injury and illness: compensation must be subordinated to safety, although the former goal remains important.

Even if all defects in the capitalist compensation system are removed—100 per cent damages, etc—two defects are irremediable.

First, it would mean spreading the costs across society through a social welfare scheme but does not mean spreading the risk of accidents more equally.

Secondly, valuation of injury and illness is still done by the state and not by people who suffer it. These are the problems in New Zealand where since 1974, in place of negligence they have what is called a 'no fault' compensation system.

A just system should be based on substantive equality. It should respond to all victims. Equality amongst victims would mean response to their needs whether or not their misfortunes were caused by fault or by human actions. The second is that the qualities of wealth and income should not be reproduced in the level of compensation.

It is obvious that tort law can develop extensively only in developed capitalist societies—only where there is a strong dominant ideology of bourgeois individualism, extensive and all-pervading commodity production (where everything is measured in term of money) and certain minimum standard of living where victims have the 'staying power' in courts, and offenders have sufficient means of payment. This, of course, is not the case with India, where we have a backward capitalist economy. Even then with the growth of capitalism more and more actions in torts are likely to arise.

Conclusion

Medical malpractice is already a well entrenched litigation sphere in western countries. Though in India uptil now there has been precious little happening on this front, it seems that more and more medical malpractice claims are being filed since the past five years, and over the next decade or so this branch will acquire at least some significance.

One cannot deny the fact that medical negligence claims are an offshoot of industrial capitalism and premises on the bourgeois ideology. Accountability of doctors coupled with redress for the victim can be much better tackled through and for a greater extent solved in societies not based on competition, treating injuries as commodities. The existing negligence law is not a panacea. But given the circumstances, it serves a useful purpose at least to an extent to mitigate the victims and bring accountability to doctors. In fact it should be seen not just as a reflection of bourgeois ideology but also as a bourgeois democratic right which requires to be extended and expanded. Also, in a country like India, where especially the poor receive extremely negligent medical treatment, extensive application of medical negligence law by people and by progressive groups can be very helpful to people and at least some way of improving health services. Also, surveys in US indicate that medical practice litigation provokes greater care at least in diagnosis.

One can only end by saying that despite its limitations, the law of medical negligence should be as widely used in India as possible.

Notes

[For many of the ideas expressed in this article I am deeply obliged to the following works.]

1 Article by Richard Able in *Politics of Law—A Progressive Critique.*
2 Hugh Collins: *Marxism and Law.*
3 Fire: *Democracy and the Rule of Law.*
4 Ronald Dwarking: *Taking Rights Seriously.*
5 Paul Philips: *Marx and Engels on Law and Laws.*
6 Pashukanis: *Marxism and Law.*
7 Curran Shopiro: *Law, Medicine and Forensic Science*
8 Mason and McCall Smith: *Law and Medical Ethics*
9 Keetortn: *Torts.*
10 Christie: *Cases and Materials on Law of Torts*
11 Charlesworth: *Negligence*
12 James: *General Principles as the Law of Torts*
13 K. Bingham: *Modern Cases on the Law of Negligence*

Banning Pre-Natal Sex Determination-I

Issues and Debates

by teesta setalvad

Five years of extensive campaigning by women and health activists has resulted in a legislation banning the selective abortion of female fetuses through the misuse of amniocentesis and other technologies. What have been the major issues which have emerged in the course of the nation-wide debate?

FIVE YEARS of extensive compaigning by women and health activists have earned us the assurance of proposed legislation banning the selective abortion of female foetuses through the misuse of amniocentesis and other technologies.

The legislation will be restricted to Maharashtra despite the centre's assurances of a countrywide law. This limitation could prove fatal to the effective implementation of the aims. The lack of a ban in neighbouring states, where the practice of selective abortion of female foetuses has grown in alarming proportions since 1983, could prompt a largescale burgeoning of clinics offering this facility indiscriminately, just across the Maharashtra border.

Though the central government has given all possible indications of passing an all India law banning the selective use of amniocentesis and other technologies, and a special committee to recommend the terms of this legislation had been appointed in March 1987 which has submitted these to the government around September last year, New Delhi seems to have chickened out of the issue. Laudable though the decision of the Maharashtra government must seem, it must be remembered that in Gujarat, Punjab, Haryana, and even New Delhi, the country's capital with these clinics blatantly offer these facilities.

Debate among activists demanding such legislation centred around two points, whether such a ban should be total or selective and if the latter, which clinics should be exempted: in the interests of the benefits of some of these tests that are vital in detecting the genetic abnormalities of a foetus. Many activists, though genuinely fearing the growing trend of such selective abortions, expressed grave reservations that such legislation would only push these tests underground. Legislation cannot and should not be the aim of such a campaign. Such legislation that precedes the change in social mores and attitudes so drastically must be backed up by certain schemes that create conditions for the aims of the law to be implemented. The debate among activists on the question of a ban, selective or complete, focussed around two main issues: the overall status of women in the country that can lead to such largescale abortion of female foetuses and the grave question of the misuse of advanced technologies, ignoring its impact on the health of women. Several democratic and liberal forces ranged against the discussion and strove through their stand to defend that ultimate test of freedom—choice.

Are choices exercised in a vacuum? The scores of women interviewed and questioned by journalists and activists clearly enunciated the rationale behind their exertion of the supreme choice—to abort after the result of a sex determination test showed the foetus to be female—to save their skin from torture or battering, to maintain their status within the marital home, to save a marriage on the rocks. All this because of the *woman's* supposed inability to bear a son.

Even more infructuos arguments were used. These included the defence of amniocentesis and other tests as a tool to reach family planning targets. Another devious counter to the increasingly vociferous protests from women's groups was the postulate that the status of women would naturally improve in societies where the sex ratio has declined. Both arguments, it needs to be stressed, have been effectively countered.

Sex determination tests do not guarantee a male child. They merely ensure multiple abortions (that is an abortion for every second foetus tested for its sex) which can do immense, if not irreparable harm to a woman's health. Women are being increasingly used and singled out as target groups (and as a result, victims) for family planning and amniocentesis is part of this trend. Lack of food, clean drinking water and a total denial of economic securities and safe clinical facilities have led to a situation where one woman has to have 6.2 children to ensure one surviving male child. The argument therefore, that successive abortions followed by amniocentesis act as family planning tools is untenable.

Research studies on societies having adverse female sex ratios, reveals that customs like polyandry, sharing a wife (outside wedlock) abduction and purchase of women are widely prevalent in such societies. Besides, it is strongly felt that adverse sex ratios may in fact lead to an increase in incidence of rape, prostitution and grave controls over women.

Female mortality was 60 per cent higher than that of males in the age group upto five years. Today, in a situation where the sex ratio is declining, this 60 per cent higher mortality exists upto 8-9 years among girl children.

Faced with these social circumstances, and now assured of legislation completely banning the use of these tests for sex determination of the foetus, activists belonging to the Forum Against Sex Determination and Sex-Preselection (FASDSP), the umbrella organisation of several groups, have forwarded their demands to the government that would give more teeth to the proposed law. Greater powers, like the one to seize and examine documents must be given to voluntary organisations that make up the Vigilance Committees to ensure that the proposed law is effectively implemented. Moreover, the FASDSP is also demanding that these Vigilance Committees consist of adequate representation from voluntary organisations, doctors and government officials who have powers under the Criminal Procedure Code to ensure concrete results.

The Forum is also asking for the inclusion of all internationally accepted indications and 'exposure to potentially teratogenic chemicals and/or radiations' in the eligibility criteria for prenatal diagnosis. The creation of an all-India supervisory body, like a Technical Expert Committee to issue,

renew and cancel licenses and ensure uniform standards at the places approved for prenatal diagnosis, has also been demanded. Periodic inspection visits by this committee to those centres granted licenses to carry out these tests could act as a monitor.

Since the entire campaign, spanning over five years had exposed the blatant ambivalence of the medical profession on an essential question of medical ethics. the FASDSP is also asking for suitable amendments to the Indian Medical Council Act to enable cancellation of the registration of those doctors found violating this proposed legislation. The Forum argues that the two processes of collection of samples and the testing should be de-linked. The former, that involves a collection of the amniotic fluid in safe and hygenic conditions could be carried out at the medical college level after careful screening of applications. Thereafter the testing must be carried out at genetic counselling laboratories where the testing, with sophisticated machinery need be done. Misuse of ultrasonography for sex determination should also be an offence though ultrasonography itself must be excluded from the purview of the ban due to its varied application. The government is considering imprisonment and fine to the offenders and the Forum is stressing that women who undergo these tests must not be punished.

It can be clearly seen that the emphasis, at every stage, in the recommendations put by the FASDSP, for the legislation to have any use, is on vigilance. Vigilance that involves a high level of commitment from both volunteers and officials who participate in the process. The limitations of just resting with this legislation cannot be underemphasised. The greatest problem being the blind preference for a male child, in a patriarchial society where male attitudes and values dominate.

Maharashtra and Gujarat, have over the last few years implemented schemes aimed directly at promoting the girl child/children family norm. Felicitation from the state to a family with only girl children, a special green card that procures extra rations, concessions in education apart from an all out publicity campaign have already begun. Moreover, one of the promotion schemes started in Maharashtra depcit not merely the single girl child family but portray the woman at the helm, making all relevant decisions concerning health and family. Apart from enthusisastic vigilance from voluntary agencies, commitments of this kind in the state's health policy could make the social impact of this legislation more effective. The aim is to give the woman, from girlhood her rightful place and share in society.

Pathetic Attitude of Doctors

More than anything else, the public debate that preceded the legislation reflected as never before the pathetic 'neutrality' of the medical profession on the ethics of the issue. Whereas more 'glamorous' questions like euthanasia draw the most eminent into the pros and cons of the debate, the selective abortion of female foetuses left the top medicos unmoved.

On the contrary, until pushed into a corner on the blatantly embarassing statistics provided through studies conducted by several organisations, medical practioners openly said that 'amniocentesis and appendicitis were their bread and butter.' At as much as Rs. 500 per sample taken, even in remote rural areas, amniocentesis for sex determination has become a lucrative commercial proposition. The number of such centres, with not even minimum standards has proliferated. In Bombay, the capital of Maharashtra the number has gone up from three to at least 20 in the period between 1983 and 1986. The larger of these sex determination clinics perform a minimum of 1,500 amniocentesis tests a year.

The Voluntary Health Association of India (VHAI) has pointed out through a study that the chances of a premature delivery in a woman having undergone amniocentesis are as high as four per cent, and the risk of abortion as high as 1.5 per cent. With these tests normally being conducted in the fourteenth and fifteenth weeks of pregnancy, abortions that follow in the second trimester are inherently dangerous. It need not be mentioned that these risks were either not revealed at all by the doctors performing these tests or, were grossly underplayed. Unless the culpability of the medical profession is assured through the proposed legislation, loopholes that already exist through provisions of the Medical Termination of Pregnancy (MTP) Act that enable a woman to have an abortion, could be exploited while this abhorrent practice continues unabated.

If effective vigilance is not maintained and these tests continue to be available at different centres for sex determination underground, there is no way in which the offence could be detected at the stage at which a woman comes for the medical termination of her pregnancy, that is, abortion. Under the MTP Act, a section provides that a woman can undergo an abortion for 'failure of contraception'. It is being argued that this section could be misused by unscrupulous medical practitioners in league with family members of the woman who have managed a test that reveals the sex of the foetus.

Apart from this, another lacunae exists that can be blatantly used by practitioners to escape the law. This was brought out through a case filed by the Mahila Dakhsata Samiti in the Bombay High Court after 21-year old Sunita Chaturvedi, mother of two girls, died as a result of an abortion that followed a sex determination test. The case which came up before the High Court in October 1986 but has lain in cold storage since, cited the victim's husband, Girdhari Chaturvedi and two doctors Dr. Meenaxi Merchant and Dr. Rajani Arya as respondents. Apart from making out a strong case against the misuse of amniocentesis, this pattern that has failed to move legal brains, reveals how section 8 of the MTP Act can be misused by unscrupulous doctors to shield themselves from the consequences of heinous acts.

This section, provides that no suit or other legal proceedings can lie against registered medical practitoners for any damage caused by any action committed 'in good faith.' Abortion followed by amniocentesis, dangerous and fatal though it might be in the second trimester of pregnancy for the woman, can leave a doctor untouched if this section remains. Such lacunae in the law can be misused against whatever limited benefits that the proposed legislation selectively banning these tests might achieve. Social attitude apart, it must be remembered, medical practitioners though now somewhat hedged in with the threat of legislation, are likely to be the main contenders of the law.

Unless an internal code of medical ethics or specific provision in general criminal law hold them accountable, the

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Banning Pre-Natal Sex Determination-II

Scope and Limits of Maharashtra Legislation

amar jesani

The Maharashtra government's bill regulating the use of prenatal diagnostic techniques is a concession to the demands of the five-year long campaign. It is also an indictment of the Medical Council for its open disregard of its own code of professional ethics. On the other hand, it carefully avoids touching the private sector, makes a mockery of people's participation and offers many concessions to the medical lobby.

THE Government of Maharashtra has recently introduced a much awaited and talked about bill in the state assembly, "Maharashtra Regulation of Use of Prenatal Diagnostic Techniques Act, 1988". The bill has come in response to a concerted campaign mounted mainly by the Bombay based Forum Against Sex-determination and Sex-preselection and supported by organisations of women, doctors, health activists, democratic rights activists and even a research institution. These groups organised demonstrations, marches, *dharanas*, exhibitions, seminars and workshops. They also used all available media to draw people's attention to the rampant misuse of medical techniques like amniocentesis, chorion villi biopsy, sonography leading to female foeticide. Many sensitive journalists and other media people helped focus the campaign not only on the issue of misuse of medical techniques but also on the status of women in our society. Several members of these organisations also accepted the government's invitation to participate in a committee which did some necessary groundwork to identify the technical and legal issues involved in stopping this misuse. The bill presented in the Assembly was, however, drafted by the government on its own.

Medical Council Indicted

Although the statement of 'Objects and Reasons' given by the minister of state in the bill, does not explicitly criticise the Medical Council, states that "In breach of professional ethics, unscrupulous medical practitioners do not hesitate to perform abortions even when the sole or one of the reasons for doing so is female foeticide". It also laments that "there seems to be a misconception about the objectives of the existing laws in the minds of many medical practitioners". It seems naive to enact a full-fledged legislation if the issue involved was only a simple misconcept about the existing laws. But to expect the government to be forthright in its assessment of the medical profession is asking for the moon.

Nevertheless, this statement brings out that sex-determination practices involved in breach of medical ethics. Therefore, it squarely indicts the Medical Council. The MC in our country has scarely made any attempt to regulate the medical profession according to the code of medical ethics formulated by it. It has not only allowed the violation of ethics to go unpunished but also at times attempted to provide justificaion and legal cover to such violation. This attitude was very glaring in the specific case of sex determination where it refused to shed its lethargy despite a very hot debate in the media for last seven years. Not only that, in a private conversation, the president of Maharashtra MC defended sex-determination practices of the doctors saying that the medical profession must grant full autonomy to the patients. It was also argued that it is difficult to prove in individual cases that sex-determination was done to get female foetuses aborted.

There are enough provisions in the code of medical ethics of the MC to take stringent action against the profession on this issue. Some individual cases also came to notice but the MC did not move. For instance, Dr. Datta Pai, who runs an abortion clinic (Pearl Centre) in Dadar, Bombay and who was a member of the government's committee on this issue, has publicly admitted that his abortion centre had provided facilities for amniocentesis till he was invited to join the government committee, though he never admitted that amniocentesis was used for female foeticide in his centre. Yet this was a fit case for the MC to seize his records of amniocentesis and the MTPs in this period and scrutinise whether in the same centre women who underwent amniocentesis were offered MTP when the foetus was found to be female. And if it were found to be so, the MC could have used two clauses of its code, namely, first, no discrimination in medical practice and second, the social responsibility of doctors, in addition to the violation of the MTP act, to punish the guilty persons.

Thus, though this bill is a concession to the Forum's demand, it is also an indictment of the Medical Council for its open disregard of its own code of professional ethics.

In our country only drugs and pharmaceuticals are regulated under a full-fledged law (albeit, a very ineffective law). The rest of what constitutes medical technology and techniques are not regulated under any comprehensive law. This bill restricts itself to the regulation of pre-natal technologies and techniques. Again, it does not regulate the introduction of new technologies and techniques even in pre-natal diagnosis. In fact it regulates only their use. Nevertheless, it is an admission of the fact that medical technologies are being misused in pre-natal diagnosis to such an extent that an independent law is needed to deal with them. By logical extension, it could be said that it gives room for health activists to push the idea that all medical technologies and techniques could be widely misused, and they are being misused, therefore stringent regulation on all medical technologies in general and new technologies in particular is urgently needed.

Secondly, it explicitly bans the use of medical techniques and technologies for the purpose of pre-natal sex determination leading to female foeticide. Thirdly, it declares illegal the giving of any advertisement in any manner regarding

facilities available for the pre-natal prediction of sex at the centre, laboratory or clinic. Thirdly, it makes illegal the seeking of such facility by the woman or by any other person for her for the pre-natal determination of sex. Fourthly, it prohibits the indication of "the sex of a foetus with or without the possible object of female foeticide". And lastly, it prescribes rigorous punishment to those who indulge in pre-natal sex determination activities.

Thus, the pressure generated by the Forum's and other individuals and organisations' efforts has helped make some breakthroughs in the present situation. But the gains are quite inadequate in many respect and this bill is a big compromise solution worked out by the government and the medical authorities—both private and public. These inadequacies make the bill, if not weaker, than at least as weak as the present Drugs and Cosmetics Act. In many ways it is a defeat in the victory for the Forum.

Sacrosanct Private Sector

The Forum has, from the very beginning, demanded the abolition of pre-natal sex determination techniques in the private medical sector. For it is the private medical sector which is primarily guilty of their misuse and not the public sector. In government institutions the government has issued a directive almost a decade back to stop their usage for sex determination.

However, the government with talks of inefficiency and corruption in the public sector is building a case for privatisation (which is already underway). It has failed to even pay lip-service to the nationalisation of the private medical sector despite such revelation of gross malpractices. It even fails to acknowledge that the 'liberalisation' that is prevailing in the private medical sector, has brought only ills for the people and for the women in particular.

Instead of abolishing all genetic laboratories and genetic clinics in the private sector the bill only wants to regulate them. As we know that such a regulation of the pharmaceutical industry under the Drugs and Cosmetics Act has not radically changed the drug scene and its misuse continues in *legal* as well as illegal manner. The regulation of genetic laboratories, genetic centres, genetic clinics, gynaecologists, medical geneticists and so on will ultimately entail the creation of an administrative set-up which will look like a mini-FDA. The expenditure that government will incur and what people will pay for these services in these centres, in the name of registration fees will far off-set in a few years the total expenditure the government would have made as a compensation in taking over all genetic laboratories in the state. As a bonus, this would have made the implementation of the ban easier and effective without depriving those women who medically need pre-natal diagnosis.

The story of regulation does not end here. The body (called Appropriate Authority (AA) in the bill) which will grant licenses and enforce the law is full of those health bureaucrats who are already overloaded and proven to be inefficient in regulating their own departments. The Director and the Joint Director of Health Services, who will become ex-office chairman and secretary of the Appropriate Authority respectively, have never made any serious attempt to curb private practice by the doctors in our rural health services. Further they are in charge of an ever-expanding rural health infrastructure which includes over 1500 primary health centres and about 200 rural hospitals. In addition they also manage cottage hospitals, district hospitals etc. They are hardly able to efficiently regulate these establishments. One can only imagine with what efficiency they will be able to regulate private medical profession and its ever increasing number of laboratories.

The composition of the Appropriate Authority (AA) is: Two ex-officio government bureaucrats from the public health department, one bureaucrat from the medical education department, one bureaucrat from the Indian Council of Medical Research, two doctors: one gynaecologist and one geneticist (no other qualification mentioned) and two representatives of voluntary organisations (in the field of health, women and human rights). Except ex-officio members, the rest in the eight member team will be nominated by the government. Thus, the participation of voluntary organisation will be as per the needs of the governments and since the AA will take decisions on simple majority, the voluntary organisations will not have much decisive say in most matters.

Mockery of People's Participation

This bill is a classical example of what the government means by people's participation. As stated above, the selection of the voluntary agency to be represented in the AA will be made by the government and not the people. Further, there will be another agency called the state Vigilance Committee (SVC) to oversee the implementation of the act. Here also, in the seven member committee, two representatives of voluntary organisations will be appointed by the government. In its supervisory functions, the SVC will pay periodic visits to the recognised centres, but it will not have authority to take action against those violating the act. For this the SVC will have to approach the AA.

Further, on the one hand representation to the voluntary agencies in the implementing bodies is given under the guise of people's participation on the other common citizens are forbidden to directly prosecute erring doctors, centres and laboratories. Such citizens will have to first approach the SVC and the AA with their complaints. There is, however, a provision for such citizens to go to court after giving two months' notice to the AA about their complaint. But to counterweigh such action, the AA and SVC, which will be in possession of all information needed to prosecute doctors, centres and laboratories, are given the power to refuse to make information available to such citizens if the same is, in its opinion, against the public interest. Thus, in the last analysis, while talking aloud about people's participation and extending an olive branch to the voluntary organisations, the government has made clever provisions in the bill to see that even those people who want to participate to stop the misuse of pre-natal diagnostic techniques cannot do so or are effectively frustrated in their efforts.

Concessions to Medical Lobby

The pressure exerted by the medical lobby while the bill was being drafted is clearly visible at several places. This is not surprising. The medical bureaucracy has time and again, on various issues (recently on the issue of charging for services) expressed its sympathy for the values of the private

sector. Further, people like the president of Maharashtra MC and Dr. Datta Pai are close advisers of the government health department.

In the defining indications and conditions for which pre-natal diagnostic techniques should be used, they have seen to it that the Forum's proposal of getting written opinion of three concerned specialists has been completely excluded in the bill. In the absence of such a provision, the private gynaecologist will be the sole decision-maker whether to offer pre-natal diagnostic facility to the woman or not. However, vague indication like the history of two or more abortions or foetal loss could be misused in the same way as the failure of contraception as an indication is used for the MTP. Just as the failure of contraception as indication for the MTP has *rightly* made abortion facilities legally available to women, the indications like foetal loss will *wrongly* make available sex-test to women who want to go for female foeticide.

The medical lobby has scored the most in the chapter on 'Offences and Penalties'. This chapter identifies three types of offenders. Type one: Doctors, centres and laboratories. Type two: The woman who seeks the test, her husband and in-laws. Type three: All those who contravene any of the provisions of the act.

The penalty prescribed for type one offenders is rigorous punishment upto three years and fine upto Rs 5000. To demonstrate that the government is going to be very strict with offending doctors, centres and laboratories, the bill has a clause here saying that the minimum penalty to these people should be at least one year imprisonment and fine of Rs.1000. But the hollowness of this provision becomes evident as we read the last clause of this chapter. This clause empowers the court, if it so desires and after giving reasons, to award less punishment than the minimum stipulated under the act. That is, a rich doctor who has misused the techniques leading to female foeticide, can, with the help of powerful lawyers, persuade the court to award minor punishment.

The second type of offenders include the woman, her husband and her in-laws. The bill says that the woman should be assumed to be innocent and thus charged only Rs 50 as a token fine and no imprisonment. The bill also says that it should be assumed that she was compelled by the husband or in-laws to undergo the sex-test. The husband or her in-laws will be punished for abettment of the offence, with rigorous imprisonment upto three years and with fine upto Rs.3000. The bill says, "The court shall always assume, unless otherwise proved, that a woman who seeks such aid of pre-natal diagnostic procedures on herself has been compelled to do so by her husband or members of his family". Here the catch is provided with the addition of words "unless otherwise proved". It is easy to prove that the victim woman will be caught and not the husband or in-laws. Who will prove it otherwise? If the husband is arrested, he will simply say that he did not force his wife to undergo the test. Now, in our society, what is the wife going to say? Of course, she herself will come forward to prove that she was not under compulsion. Feminists and their supporters were fighting against the government to save the woman who is a victim of the patriarchal system. This bill makes the victim a criminal who will have to serve upto three years in prison. This is an outright anti-woman provision. The earlier everybody starts raising their voice against it the better.

We all know that there is inequality in our society. But our constitution says that everybody is equal before the law. We all call it formal equality. But not so in this bill. There is no equality between the doctors, centres and laboratories on one hand, and the victim woman and her husband or in-law on the other hand. The bill says that the offence committed by type two and type three offenders "shall be cognisable, non-bailable and non-compoundable". This means, when a complaint is made to the police against the victim woman, her husband or her in-laws, the police has to act to arrest them. Once arrested, only the court can give bail. The non-compoundablity makes it difficult to get any compromise settlement.

But the type one offenders (doctors, centres and laboratories) are excluded from the above provisions by making their offences, non-cognisable (the police is not required to act when the complaint is filed), bailable (if arrested at all, can get out immediately on personal bond, i.e., the police itself can grant bail) and compoundable (can hammer out an out-of-court settlement).

This shows that our government considers the offences committed by the doctors less criminal than those committed by the victims (who paid that doctor exhorbitant amounts). In our society the person who actually commits female foeticide by doing a sex-test and selective abortion is less of a criminal than victims of patriarchal ideology and physical and socio-economic compulsions.

Some Lessons and Future Plan

This bill has once again emphasised that only good intentions of some individuals, groups and the 'goodness' of some bureaucrats do not add upto desired change. This is not to question intentions, but the methodology of affecting change and the ultimate gains. The system does not like to have gross irregularities in its functioning. The current system permits irregularities outside its rules only upto the time it needs them. Thus, the government will also be found responding to certain demands for establishing the rules of game in the fields where such irregularities are rampant. Only such an approach can keep up the credible face of the system before the masses.

But these rules of game, under the pressure of small groups and media, are not framed while punishing the guilty. The Environment Act came without punishing Union Carbide. The industry was not punished before bringing the Consumer Protection Act. In the same way the builders are not going to be disciplined before the housing act is brought in. And no doctor is so far penalised for committing female foeticide. This shows the light-mindedness of the government and the feebleness of the efforts made by the groups concerned. As a result, all laws are passed but they are toothless laws.

Therefore, the groups who campaigned against female foeticide cannot remain complacent. They must continue their campaign raising their original demands like abolishing pre-natal diagnosis in the private sector, absolute protection to the victim woman and so on. They must, while going to the masses with those demands, also demand amendments in the bill. If the bill is made a law without demanded changes, the campaign must be continued. At the same time,

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Good Manufacturing Practices

How Serious is the Government

amitava guha

Through a notification the government has introduced a draft amendment to the Drugs and Cosmetics Rules, 1945 which are aimed at introducing Good Manufacturing Practices (GMP) in the pharmaceutical industry. But clearly, the government is not at all serious about implementing these measures as becomes obvious if the draft GMP is scrutinised.

THE DRUGS and Cosmetics Act, 1942 and Drugs and Cosmetics Rules, 1945 are both ancient laws. They have to render minimum check and control on production, distribution and marketing of modern pharmaceuticals. It is also proved that this Act and its rules although amended in 1979, 1980 and 1982, cannot provide the government adequate power even to ban a harmful drug. The Government of India, through a notification of June 22, 1987 had introduced a draft amendment to Drugs and Cosmetics Rules, 1945. The amendments are aimed at introducing Good Manufacturing Practices (GMP) and it is stated in the notification that:

> Any objection or suggestions which may be received from any person with respect to the said draft rules before the expiry of the period (thirty days from the date on which the copies of the official gazette in which this notification is published are made available to the public) so specified will be taken into consideration by the Central government.

What is GMP

In USA in the early 70s a large pharmaceutical company was convicted when due to faulty manufacturing practices, a drug manufactured by them caused a large number of deaths. The same company, aiming to refurbish its image and goodwill proposed to other manufacturers a self regulatory code for manufacturing of pharmaceuticals. Later, the World Health Organisation took the initiative to prepare a norm of Good Manufacturing Practice. At the 28th World Health Assembly in 1975 the revised text of 'Good Practices in the Manufacture and Quality Control of Drugs' was adopted. It was recommended that all member states (which includes India) should apply the requirements of good manufacturing practice.

The practices laid down in GMP are designed to ensure that the drugs received by the consumers have been subject to stringent control from the beginning to the end of the manufacturing cycle to ensure that they are of high quality. The expression 'manufacturing' for this purpose refers to all operations involved in the production of a drug including processing, compounding, formulating, filling, packaging and labelling.

WHO has grouped GMP in mainly the following sections—personnel, premises, equipment, sanitation, starting materials, manufacturing operations, labelling and packaging, quality control system, self inspection, distribution records, complaints and report of adverse reaction. It has provided very broad guidelines of GMP for its adoption in a suitable form by the member countries. It took India about a decade to think of implementing the decision of the World Health Assembly on GMP.

Without a high standard of ethics it is impossible to maintain GMP. In developed countries drug manufacturers had, on several occasions, faced strong criticisms, litigations resulting in heavy compensation and stringent government regulations. The GMP is self-regulatory and not a compulsion under law in the developed countries. It was found that the same international company which maintains GMP at their establishments in parent countries, does not care to do so at their establishments in the underdeveloped third world countries. In some countries statutory actions have to some extent forced the multinationals to follow some kind of ethics. The Indian experience is different. The Committee on Drugs and Pharmaceuticals (Hathi) expressed its concern on the rampant violation of laws by the drug multinationals in India. Despite this, the Government of India had decided to enforce GMP only by changing the statute. It is, therefore, necessary to analyse the nature of the amendment the government intends to introduce and the consequences of the statute if it is truly implemented.

Some Problems Relating to GMP

WHO had suggested Good Manufacturing Practice for the manufacture of formulations only. There is as yet no code/guideline for manufacturing basic bulk drugs. This is particularly disturbing when now-a-days multipurpose pharma plants are capable of producing more than one drug in the same process plants.

A company may produce a combination of two or more drugs of high technical quality and bioavailability but the combination itself may be irrational and not needed by the population of the country where it is marketed. GMP should also cover these drugs. WHO had defined GMP as 'pre-marketing quality assessment' the essential factors of which are:

"A notification procedure: is the the least resource-intensive ways of obtaining information on drugs offered sale in a country. The amount of information required for notification may vary. It may be initially restricted to the name of the drug and manufacturer, and may then be expanded to include the nonproprietary names for active substances, the composition, including inactive ingredients, and pharmacological classification". This will eliminate all irrational formulations which have no place in any standard books of pharmacology.

"An authorisation procedure: can be developed in which either all drugs or specified ones only require an authorisation before they are marketed in the country. This may vary

in its stringency but it almost always incorporates the element of inspection of the manufacturer and the verification of product quality by analysis.

"A registration procedure: comprises the evaluation of data intended to prove the safety and efficacy of the drug and to determine the indication for its use. The registration may include an assessment both of the drug and of the manufacturing procedures".

Pre-marketing quality assessment therefore should form an integral part of GMP. This is missing from GMPs adopted in most of the countries.

The other thing which is missing in these GMPs adopted in the other countries is a complete set of guidelines for post manufacturing surveillance which should include the marketing code also. This we need to discuss more in the context to our country.

It took a decade for the Government of India to formulate GMP after they participated in 28th World Health Assembly where the resolution on GMP adopted. It is clear why the government suddenly became so conscious of the need to introduce an amendment and pass it in a short 30 days' time. This of course, follow the recent pattern of the government taking snap executive decisions bypassing even the Parliament. Causal, non specific and absurd rules have been suggested that too without determining any logistics for their implementation.

We have three major laws and regulations which govern production and sale of drugs: Drugs and Cosmetics Act 1942; Drugs and Cosmetics Rules 1945; Magic Remedies Act. In UK the main law is the Medicines Act, 1971. There were 34 regulations set out by British government (upto 1981) to govern the production and sale of drugs many of which are directly and indirectly connected to GMP.

There are major inadequacies in the government's draft GMP as far as the premises and equipment are concerned. In the draft only eight points are mentioned while in British GMP there are twenty-two specific directives. The draft says: "They (the building) should conform to the conditions laid down in the Factories Act, 1948 (63 of 1948)'. It is well known that because the age-old Factories Act has been of no use in regulating the conditions of the technologically developed modern factories the government has brought forth a further amendment to the Factories Act. What type of control then can one except from this Act on the 'high tech' pharmaceutical factories?

The draft also had not cared to look into the effect of factories on environment inside and outside the premises. There are international standards on the limit of toxic materials and suspended particles in the air. The draft GMP has totally ignored it. Not only this, the draft has not dealt with the disposal of containers of bulk drugs and other materials which may not loose potency by simple washing with soap water. Nor does it mentioned how and where to dispose toxic effluents. The British GMP, in contrast to our draft, says:

> Waste materials should not be allowed to accumulate. It should be collected in suitable receptacles for removal to collection points outside the buildings, and disposed of at regular and frequent intervals. Special care is necessary over the disposal of waste containing dangerous, highly toxic or sensitising materials (eg hormones, cyto toxic agents, sensitising antibiotics). Disposal of raw materials, printed packing materials and rejected products should be carefully controlled and documented.

The draft is extremely casual in this area. It is very vague and non specific when they state that the manufacturing area for sterile drugs "shall be provided with air locks for entry and shall be essentially dust free and ventilated with an air supply through bacteria retaining filters (HEPA filters)". While British GMP has a separate chapter containing 126 sub clauses for 'Manufacture and control of Sterile Medicinal Products', our legislators had to be satisfied with only two tiny paragraphs.

Various HEPA filters are used to create sterile conditions of air for different purposes. Therefore, a standard is needed to be fixed for production area of sterile materials. Not only this, there should be standardisation of specific final filter efficacy with recommended minimum air changes per hours and the equivalent classification of HEPA filters available in India. Absence of such standardisation will lead to the controversies in application of strictures and the manufacturers will take recourse to some other laws to evade this vague stipulation.

Another classic example of casual approach can be found in the draft under the peculiar heading 'All Medical Services' that "Medical inspection of workers at the time of employment and periodic check up thereafter once in a year, with particular attention being devoted to freedom from infection conditions and records thereof shall be maintained".

It is beyond the scope of anyone's understanding as to how check up once in a year will ensure that the workers had no infection in the remaining days of the year. We are yet to imagine a worker who is suffering from infective cold voluntarily informing the management of his ailment. When there are a large number of contract labourers working in both big and small companies reporting of such minor but contaminous disease may mean loss of wages for the entire week. British GMP is somewhat more specific in this respect: "There should be preemployment medical checks, and steps should be taken to see that no person with a disease in a communicable form, or with open lesions on the exposed surface of the body, is engaged in the manufacture of medicinal products."

The staff should be required to report infections and skin lesions and a defined procedure followed when they are reported. Supervisory staff should look for the signs and symptoms of these conditions".

In the industrial policy declaration of 1984-85, the government announced broad banding in the pharmaceutical industry. Astoundingly the government under the scheme mentioned that equipment each as mass mixers, cone blenders, drying ovens can be used under broad banding. The British GMP has elaborately dealt with how to avoid cross contamination and mix-up. The draft Indian GMP has only mentioned the term mix-up in a subheading but nothing has been specified as to how to prevent it. Nothing has also been specified regarding the use of masks, gloves, etc, in different manufacturing area.

There should be certain codes for pharmaceutical machinery manufacturers also. For example in most of the hot air driers the lining used is asbestos. The inner walls of such driers, particularly for drying pastes, are usually coated with heat resistant paints. There is every possible chances that such paints may be dislodged from the inner surface and get mixed up with the paste or powders kept in the trays.

It is also necessary that the GMP defines clearly the maximum permissible operations per punches of the tablet compressors after which they should be discarded. Similarly it specifies limits per use of filter bags of the fluidised bed driers, etc.

Experts who had drafted the GMP are so confident of their work that they feel that their work will remain unaltered for eternity. The draft has not suggested a periodical review of the conditions recommended. The first edition of 'Guide to Good Pharmaceutical Manufacturing Practices' was published in UK in 1971. Thereafter it was amended in 1977, and in 1985. It clearly states—"Time has shown that it would be helpful to rearrange and in places, clarify and enlarge the text and to give on further topics." Due to advancement in technology and scientific concepts GMP cannot remain static. In future GMP will need to include norms for electronic data processing and retrival systems.

Quality Control Laboratory

The section on laboratory practice is the most important and sensitive part of GMP. In fact a separate set of law/guideline is needed for this. In the 28th World Health Assembly it was decided that a comprehensive review of approaches to quality assurance system would be made (WHA 28.66). A document accordingly was prepared by the Experts Committee and its report was published in the twenty-seventh report of the committee. Thereafter, the committee has produced three more reports elaborating the quality assurance systems. The thirtieth report had reviewed and added more recommendations to the earlier reports. The draft Indian GMP has ignored these facts. In the 28th World Health Assembly a small guideline was prepared on quality control system giving some objectives. The draft GMP has simply reproduced these guidelines but has not elaborated on either the methodology or the stipulations which are needed for good laboratory practice.

A major decision which is needed to be taken is whether there should be any commercial establishments for certifying quality assurance. After the facts revealed in Justice Lentin's Commission chart how political power and profit dictates the reports of the private laboratories, it is high time we decided whether any private commercial laboratories be allowed to test drugs. On the other hand the government has only five test laboratories in the country to cater to 9000 drug firms registered under DGTD.

Further the government has not considered the prevailing set up in India while preparing a new edition of the Indian Pharmacopea which is a 90 per cent replica of the British Pharmacopea. Any unit, big or small wanting to establish its own quality control laboratory will definitely need microbiology testing system spectrophotometry system for both ultraviolet and visual range, etc. While the former needs a large of space and special furniture the latter costs a large amount of money. The minimum necessary equipment for such a laboratory needs an investment of Rs 3 lakh. The definition of a small scale industry till date is a company having turn over of Rs 50 lakh. How can such a company invest Rs 3 lakh for a quality control laboratory?

Moreover, considering that all companies would have their own quality control system where maintainence of a spectrophotometer would be a must would our government laboratories be in a position to supply International Chemical Reference Substances of all drugs (both active and inactive substances) for regular calibration of their instruments. Our experience is that even the government laboratories do not maintain all reference substances to calibrate their own spectrophotometers. The draft amendment only says: "Every manufacturing establishments shall have a quality control department supervised by approved expert staff. . ." It does not say anywhere what should be the minimum equipment to be maintained in this section.

It is also necessary to clearly describe the premises of the quality control laboratory—how they should be arranged; what are the hygenie conditions, temperature, humidity, sterility conditions etc to be maintained inside. How the instruments are to be calibrated and how often their sensitivity be checked under what standard. Similarly, the reagents need to confirm to a standard guideline. Guidelines for maintaining concentration, standardisation factors, shelf life and storage factors, should also be specified and how often the prepared reagents should be checked to find out their suitability, etc.

There should be clear guidelines as to the stage of collection of samples for quality testing and for identifying, preserving and recording the samples before and after testing. Documentation of the analysis is also of great importance as well as a good documentation system.

The draft GMP had not considered many other substances which are used for curative purposes. No GMP had been suggested for the manufacture of medical gases, or of radio pharmaceuticals. A large number of verterinary medicines are also used in ur country. The draft GMP says nothing about these not even that the GMP for other pharmaceuticals should be followed in producing veterinary medicines as well. Interestingly the British GMP says: "Some veterinary products such as those used for mass external treatment of animals (e g, sheep dips), have no direct equivalent among products for human use and the recommendations on manufacturing premises and equipment given elsewhere in the guide may not be appropriate."

Post manufacturing GMP

Two most important points not given any consideration at all by the draft GMP are post marketing surveillance and distribution. The responsibility of a drug company does not end with the manufacturing of a drug. The manufacturer needs to take care that the drug is stored under prescribed appropriate storing conditions in the factory warehouse and the same has to be followed by the middle men engaged in wholesale and by the retailers in the chemist shop also. Clear guidelines are needed to be specified for transport conditions particularly for a vast country like India. Where products in transit may be subject to conditions such as unacceptable degrees of heat, cold, light, moisture or other adverse influence including attack by micro-organisms and pests.

There should be certain specified norms regarding maintenance of stocks which are rejected due to damages for spillage or breakage. These are to be kept separated from the stocks of expired drugs. Proper recording, labelling and disposal is also to be specified. Therefore GMP should include 'Good pharmaceutical storage, distribution and/or wholesale practice' also.

There is virtually no system in our country to supply package inserts along with each sales pack of drugs giving important side effects, precautions, adverse reactions, interaction with other drugs, etc. Lack of proper norms of labelling has led to situations where sometimes it is very difficult to decipher the constituents of the active ingredients of the drugs from the labels. Brand names are printed in bold while the generics are printed in or in very small type.

In 1968, the 21st World Health Assembly adopted a resolution (WHA 21.41) urging member countries to enforce control on advertisements. The resolution stated the ethical and scientific criteria for pharmaceutical advertising and covered advertising to the medical and related profession as well as to the public. From the perspective of consumer protection, it is important that the consumer should be alerted to all side effects, contraindications, warnings, hazards, and precautions. It has been observed that a fair balance can be considered to be lacking if:

a) Information is included in an advertisement that has not been approved for inclusion in the promotional material at the time of registration.
b) Advantages are claimed for the drug without simultaneous disclosure of disadvantage.
c) Obsolete information is used
d) Claims are exaggerated
e) Animal or laboratory data are cited as clinical experience.
f) A statement by a recognised authority is quoted without also citing any unfavourable opinions of that authority.
g) Statements are used out of context.
h) Statistics are used in a misleading way
i) A headline or pictorial presentation is misleading (*Guidelines for the Development of a National Drug Control Programme*; Pan American Health Organisation; pp 79-80)

The draft GMP shall include all these conditions for the dissemination of correct and unbiased information.

Monitoring of a drug, new or old is continuous work. It has international impact also. Since 1960, the World Health Organisation had been insisting that all member countries should develop centres for monitoring adverse drug reactions. In the 1963 World Health Assembly it was resolved that the member countries would co-operate with each other in the dissemination of adverse drug reaction so that the best possible protection can be offerred to consumers.

In our country, no system of monitoring adverse drug reactions had been set up. Although a few such centres are in existence but they are often found to defend the hazardous drugs instead of monitoring their adverse reaction. A centre under the University College of Medicine, Calcutta was found, a few years ago, to be conducting a study financed by an industry house on the need of a combination drug—chloramphenicol and streptomycin. The head of the centre later published their study in support of this irrational and hazardous combination in the *Journal of Indian Medical Association.*

The draft GMP, under the subhead 'Records of Complaints and Adverse Reaction' only says that—"Reports of serious adverse reactions resulting from the use of drug along with comments shall be informed to the concerned licensing authority". This is the only thinking expressed in the draft regarding adverse drug reaction. The total responsibility has been left to the manufacturers who have no mechanism to keep track of adverse drug reactions. Their tendency is to suppress such information however rare it may be. Even accepting the fact that a manufacturer may report some incidents of adverse drug reaction, what would the government do? The draft GMP suggests nothing. In the event of such incidents, the British GMP elaborates on how to recall the product. The system of recall inflicts a red alert. It not only stop the sale of the product but also directs stoppage of the production operation till the reasons for adverse reaction are explored after investigation by the government authorities.

From the above, it can be concluded that while preparing the draft GMP, the government had not been in the least serious. Incomplete measures, casualness and pro-manufacturers bias to more or less maintain existing frivolous attitude to the safety of the consumers has been reflected in the clauses of this draft. Moreover it will be impossible for the small scale industries to follow this GMP, if the ammendment is converted to law. It will be impossible for them to establish full fledged in-house quality control laboratories. It will also be impossible for the old industries particularly those which are situated in the densely populated area or housed inside old industrial estates to expand the manufacturing area as required by the GMP. Therefore, the incoming GMP will have to compromise with the industry irrespective of their size and capability in the areas of quality of products and will in no way bring minimum safety and security to the consumers and workers of the pharmaceutical industry.

A Note

THIS note is to inform the readers of *RJH* that from June, 1988. I shall be moving from the category of Working Editors of RJH to that of the Editorial Collective. The reason for this shift is that for the past one year I have moved out of Bombay to a small village in Pune district of Maharashtra for a period of five to six years. I have thus hardly been a 'working' editor during this period.

It is only due to my persistent request that the other Working Editors have finally, and reluctantly, agreed to let me shift out. Moving out creates in me a feeling of deep personal loss because all the three Working Editors, as well as some of the comrades in the Editorial Collective of *RJH* are my closest friends. During the next five years I shall greatly miss the warmth and the intellectual stimulation that the RJH collective has always offered to me.

I shall certainly continue to stay within the Editorial Collective of *RJH* because I fully believe in the ideological perspective of the Journal and have no differences either political or personal with the form and content of RJH. I am sorry that I am not able to undertake more responsibility on behalf of *RJH,* much as I want to. And, I am aware that the loss is mine.

In solidarity

Manisha Gupte.

Medical Ethics

An Introductory Essay

gayatri singh

With the rapid advance in medicine and its increasing privatisation, the highest standards of ethical conduct are called for from doctors. It is for this reason that the medical profession is governed by certain fundamental ethical principles. By setting certain ethical principles a doctor's expertise is attempted to be harnessed for the needs of society. What are the issues which confront doctors when interacting with patients?

WITH the medical profession becoming increasingly specialised, the acquisition of higher medical education and knowledge has become the prerogative of the upper middle class, resulting in fundamentally altering the age-long close-knit 'family relationship' that existed between a doctor and a patient. Not only has the doctor become increasingly isolated from the needs of the patient, but the medical profession as a whole has miserably failed to extend its knowledge and facilities for the benefit of the public.

Overawed by the doctor's grasp of medical 'knowledge', and unable to comprehend the complexities of the medical world, the patient is placed in a hopelessly unequal bargaining position. The surrendering of the patient to the doctor has become complete to such an extent that treatment, even if unsafe, is not questioned. Being thus placed in a position where the doctor has virtual control over the well being of the patient it is not surprising that the doctor can, wittingly or unwittingly, abuse his/her superiority. As a consequence of this strained relationship the nagging question that a doctor is constantly faced with and which he has to ultimately is: whether the health and well-being of a patient should be given priority or whether private profit and fame should be the driving motive which ought to define the doctor's relationship with his/her patients. Doctors must perforce decide which interests out of the two should prevail and the taking of such a decision depends to a large extent on the personal inclinations of a doctor. Since a patient is not divorced from the rest of society, the doctor's personal views with regard to the mode of treatment of patients has raised important ethical questions like: Should drugs, known to be positively harmful be prescribed to patients without explaining to them their harmful effects? Should technology and research be promoted for purpose other than for remedying the health of patients? Should doctors aid police officials in issuing false certificate certifying the death of a person to be 'natural' when in fact the death is known to be the direct consequence of tortue inflicted by the police? Should doctors refuse to give emergency treatment to a person solely because it is a medico-legal case?

These are just a few of the many troubling issues, which doctors are invariably confronted with in their day to day practice while interrelating with patients. A doctor may choose not to answer these questions and wriggle out of a delicate ethical dilemma by arguing that the manner in which a doctor relates to his/her patient is basically a private matter. It has been argued that the setting of standards for medical practice, directly impinge upon a doctor's right to practice and hence no such standards should be artificially imposed. A doctor should be allowed to freely relate with his/her patients in the manner which he/she thinks is most appropriate. If a doctor uses the medical profession to maximise his/her profits that is the personal choice of the doctor which ought not to be interfered with.

Yet, though doctors may relate to their patients at a private level, the fact is that doctors play a vital role in preserving and maintaining the health of a society and the medical profession cannot be left to regulate itself for important life and death issues are involved. Since doctors do not operate in a vaccum the decisions that they take vis-a-vis their patients have a bearing upon how they see their role within the medical profession. A doctor does not relate only with the patient but assumes various roles which require him/her to take important decisions which may adversely affect others. Thus, when a doctor decides to perform an abortion, despite laws to the contrary, s/he is not only expressing his/her personal views on abortion but is in fact making a public statement as to whether persons have a basic right to choose whether to bear a child or not; conversely, by refusing to perform an abortion because of one's religious or personal views, one is clearly taking a public stand by *refusing* to extend one's services for performing abortions.

Considering the complex social issues that one is confronted with, it may be extremely difficult to distinguish between what constitutes medical morals and medical ethics. For instance, when does one's personal views become the concern of the public so that public intervention becomes necessary for setting standards with regard to a doctor's practice? With the rapid advance in medicine and its increasing privatisation, the highest standards of ethical conduct are called for from doctors. It is for this reason that the medical profession is governed by certain fundamental ethical principles however outmoded they may be today. By setting certain ethical principles a doctor's expertise is attempted to be harnessed for the needs of society. It attempts to lay down certain guidelines though vague, with regard to what ought to be 'acceptable social conduct' of a doctor.

Evolution of Medical Ethics

If we look at the history of the growth and evolution of medical ethics we find that it was the doctors who initially played a vital role in establishing and setting standards for their profession. It is for this reason that the personal views of the doctors got reflected in the constitution of medical ethics. As the public became increasingly aware of its rights within the health care system, higher standards of practice were sought to be imposed upon doctors, though the code of ethics followed by the medical community has remained virtually stagment and the changes have been far from

satisfactory.

The earliest and the first known medical code was the *Code of Hammurabi* (c. 1900 B.C.), which set out, amongst other guidelines for doctors, the mode of receiving payments from their patients. According to this code, payments should inter alia, take into consideration: (a) the results of the treatment; (b) the patient's ability to pay, and (c) the status of the patient. Though the concept of payment for professional services has undergone certain changes, the basic concept of "no cure, no payment" has been deprecated, in modern day medical ethics.

As medicine developed and became more complex, it became apparent that certain standards for the practice of doctors would have to be specifically outlined with a view to prevent malpractices. Thus, a code of ethics evolved, which is today commonly known as the Hippocratic Oath. This oath forms the basis, upon which all subsequent international and national medical ethics have evolved. It is interesting to note that this oath was not a product of any public outcry against malpractices, but received inspiration and support from within the medical community. The oath lays down the following ethics to be followed by doctors:

1. The medical profession is to be harnessed for the benefit of the public and the doctor must, to the best of his ability, do good to the patient.
2. Abortion and euthanasia are to be condemned.
3. The nature of doctor/patient relationship is outlined and to take advantage of the superior position of a doctor is disapproved.
4. Strict medical confidentiality is to be maintained.

A modernised version of the oath was introduced by the World Medical Association as the Declaration of Geneva, which was amended at Sydney in 1968. Certain general guidelines for doctors were outlined (which stressed the importance of the health of the patient and the belief that the doctor should not only practice his profession with conscience and dignity, but should devote his life to the service of humanity. Great stress was laid on confidentiality which should be maintained even after the death of the patient. Competition within the medical community was also strongly condemned. "Utmost respect for human life from the time of conception" was the advise given to doctors. The strong views of the medical community against abortion is clearly reflected in this declaration even as late as 1968.

This declaration provided the basis for a more comprehensive International Code of Medical Ethics which lays down the duties of doctors in general, namely that a doctor must maintain the highest standards of professional conduct and must practice his profession uninfluenced by the profit motives. The doctor must not do anything unethical like self advertising, collaborating in any form of medical service in which the doctor loses his professional independence or receive any money in connection with services rendered to a patient other than a proper professional fee. As far as the duties of doctors to the sick are concerned the International Code states, *inter alia*, that a doctor must preserve absolute secrecy and must give emergency care as a humanitarian duty unless he is assured that others are willing and able to give such care. As far as duties of doctors to each other are concerned doctors are prohibited from enticing patients from their colleagues and a doctor in advised to treat his colleagues as "he would have them behave to him". Though all the three codes, the Hippocratic oath, the Declaration of Geneva and the International Code of Medical Ethics are vague and general in nature, the basic principle underlying all these three codes is the subservience of profit to the motives of the health and well-being of the patient.

An international attempt at setting medical ethics with regard to torture and other cruel, degrading and inhuman treatment, has also been made. This statement is embodied in the Declaration of Tokyo, 1975. Since a medical doctor practices medicine in the "service of humanity" having the utmost respect for human life, he is expected not to "countenance, condone or participate in the practice of torture or other forms of cruel, inhuman or degrading procedures, whatever the offence of which the victim of such procedures is suspected, accused or guilty". Nor shall the doctor provide any premises, instruments, instances or knoweldge to "facilitate the practice of torture or other forms of cruel, inhuman or degrading treatment or to diminish the ability of the victim to resist such treatment." The doctor must also have complete "clinical independence in deciding upon the care of a person for whom he or she is medically responsible. This code for the first time lays international standards and calls upon doctors to take an unabiguous stand against torture, and inhuman treatment of persons. It is obvious, that this declaration is applicable not only to countries under dictatorial rule but equally to countries which operate under the facade of 'democracy'. For it is here that the services of doctors have a greater chance of being misused. Fear of losing their jobs in government hospitals or fear of being deprived of certain benefits and privileges may force doctors to give false evidence or wrongly diagnose the injury of a patient or issue false certificates upon instructions from government officials. To fall a prey to such practices is clearly unethical and the concerned doctor can be hauled up by the national medical bodies for 'misconduct'.

With the increasing growth of medical technology, new inroads are being made in bio-medical research which involve human beings as research subjects, and hence the need was felt by international medical bodies to set guidelines in this regard. The Helsinki Decleration sets guidelines for conducting medical research which are essentially diagnostic and therapeutic in nature as well as for those whose essential object is purely scientific. It declares that concern for the interests of the subject must always prevail over the interest of science and society, and "in any research on human beings each potential subject must be adquately informed of the aims, methods, anticipated benefits and potential hazards of the study and the doctor should obtain the subject's freely given informed consent, preferably in writing". Unfortunately, the Helsinki Declaration bases its recommendations on the premise that if medical progress is to take place at all it must rest, in part, on experimentation which basically involve human subjects. At any rate, the positive aspects of this declaration are being implemented more by their breach.

The Indian code of medical ethics is based upon principles and standards set out under various international codes mentioned above. It incorporate the basic principles with regard to: (a) Service to humanity, (b) Misuse of medical knowledge contrary to the laws of humanity. (c) utmost respect for life from the time of conception; (d) respect for the secrets which

are confided in the doctor; (e) upholding the noble traditions of medicine; (f) treating colleagues as 'brothers'.

The general principles under the code outline the character of the physician and his/her relationship to society. Advertising or solicitation of patients is specifically prohibited. Income from professional activities is to be limited to services rendered to the patient and remuneration to be received for such services should be specifically announced to the patient. A physican is prohibited from prescribing or dispensing secret medicine or other secret remedial agents of which he/she does not know the composition. Duties of doctors to their patients deal with emergency treatment, maintenance of strict confidentiality and provision of proper medical care. The code also deals with duties of the physician to the profession at large, to each other, in consultation and to the public.

The national as well as state codes provide for initiating disciplinary action against a doctor for breach of any of the specified medical ethics. The action may be brought before the appropriate medical council (national or state). The medical council may consider and deal with any form of unethical practice which may be brought before it although it may not appear to come within the scope of the precise wording of any of the categories mentioned in either the national or state codes. It is obvious that if an unethical practice is specifically prohibited by any of the international codes of which India is a signatory, the national or state medical council can take as action against the erring doctor. The appropriate medical council may award such punishment as may be deemed necessary or may direct removal permanently or for a specified period from the register.

At the national level there are various laws which govern medical ethics of the medical profession.

The Indian Medical Degrees Act, 1916 prohibits all persons, save certain specified authorities, from issuing or alleging that they are entitled to issue any degree or diploma in western medicine or surgery. The act is restricted to the western methods of allopathic medicine and surgeons, homeopathic, ayurvedic and unani practitioners being excluded.

The Pharmacy Act, 1948 allows for only those who have attained a minimum standard of professional education to practice the profession of pharmacy. The Central Council of Pharmacy set up under the act is empowered to prescribe minimum standards of education and approved courses of study of examination of pharmacists. Section 36 of the Act lays down conditions under which the name of a registered pharmacist can be removed from the register for e.g. if the name has been entered by error or on account of misrepresentation or if the pharmacist has been guilty of any 'infamous conduct' which includes breach of professional ethics.

The Dentist Act, 1948, contains provisions for the constitution of an Indian Dental Council which is empoowered to lay down minimum standards of training and Provincial Councils which are empowered to maintain registers of persons entitled to practice dentistry. Section 17A of the act empowers the Dental Council of India as well as the State Dental Councils to prescribe standards of professional conduct and etiquette or a code of ethics for dentists. Such regulations may specify which violations thereof shall constitute 'infamous conduct' or in other words professional misconduct. Since the State Dental Councils have powers to adopt rules of professional ethics, they vary from state to state.

The Indian Medical Council Act, 1956, gives representation to licentiate members of the medical profession and provides for the maintenance of an all-India register by the Medical Council of India which will contain the names of all the medical practitioners possessing recognised medical qualifications. Section 20A empowers the medical council (state or central) to prescribe standards of professional conduct and etiquette, and the regulations so framed may specify which violations thereof shall constitute 'infamous conduct' or professional misconduct. Under the act, the name of the medical practitioner can be removed from the register either on his/her own volition or if a misconduct has been indulged in. 'Misconduct' is defined as:

(a) Conviction of a registered practitioner by a criminal court for an offence which involves moral turpitude.

(b) Conviction under the Army Act, 1950

(c) Any conduct which in the opinion of the council, is infamous, in relation to the medical profession particularly under any code of ethics, prescribed by the council or by the Medical Council of India constiuted under the Medical Council Act.

For any of the misconducts an inquiry has to be conducted by the appropriate medical council, before any action against the doctor can be initiated.

Role of the Medical Council

Since the Medical Council is the governing body of the medical profession, its main function has been the protection of a doctor's interest, and moves into action only if the conduct of a doctor brings disrepute to the medical profession. Take for example the highy unethical practices indulged in by the Federation of Obstetric and Gynaecological Societies of India (FOGSI) which took upon itself the task of representing and promoting a particular contraceptive. The Federation had circulated letters to the medical community urging them to promote the use of *Today*, a contraceptive manufactured by Bliss Chemicals. (Report by Rupa Chinai, *Indian Express*, 5.4.1988). The Maharashtra Medical Council because of the publicity, was forced to act against Dr. Daftary chairman of the Medical Termination of Pregnancy Committee. Clause 30 of the Maharashtra Code of Medical Ethics clearly states that medical practitioners would be guilty of 'misconduct' if they associate with "medical agents or manufacturers in the advertisement of products of particular manufacturers." This is not the first time that a medical body like the FOGSI has been closely associated with drug manufacturers. In the public hearing on high dose EP drugs held at Bombay, FOGSI filed affidavits supporting the use of this drug despite the existence of voluminous evidence to show that the drug was harmful. High dose EP drugs are being promoted by various pharmaceutical companies and it is evident, by going through the affidavits alone, that the FOGSI in collaboration with certain drug manufacturers was promoting the drug realising fully well that the drug had been banned in certain western countries because of its proven harmful side effects. The medical council has not taken any action against the FOGSI.

With the growth and poliferation of pharmaceutical companies, the bond between doctors and drug companies has

become stronger. In order to promote a particular brand of a drug company, doctors prescribe medicines to their patients, which are either of no use or are patently harmful. The tremendous hold of the drug industry over the health care system in our country, was recently brought to light by the Lentin Commission. Another example of the proliferation of useless and spurious drugs in the fact that more than 20,000 kinds of non-prescription drugs are on sale in the Indian market. most of which are non-essential and about 25 per cent of them spurious. As against this, the WHO has prepared a check list of only 200 essential drugs. Though the medical council is fully aware of the unethical practices of doctors prescribing drugs known to be harmful and useless, why has the council not prosecuted the doctors and more importantly should not the medical council have powers to initiate proceedings against drug companies?

The research establishment, both private and government, also collaborate with drug multinationals in conducting human trials. Human experimentation by the medical community is justified on the ground that such trials are for the benefit of humanity. For example, experimentation by administering injectable contraceptive Net-pen, which has not been proved as a safe drug is being conducted on several thousands of Indian women, who are being used as guinea pigs without their informed consent. These trials are being initiated by the government's family planning programme. The Helsinki Declaration clearly states that no tests should be conducted on human beings unless they are proven to be safe and without obtaining the informed consent of the person on whom the experimentation is to be done. The Net-ten tests are in clear violation of this declaration. The governmental institutions are the most consistent violators of medical ethics and yet the medical council and courts have been hesitant and unwilling to take any action.

In the Bhopal case, the government and its research institutions have effectively suppressed all medical information pertaining to the after-effects of MIC. and the treatment to be given to the victims. For example, though the Indian Council of Medical Research (ICMR) prescribed mass detoxification to the victims, by injecting sodium thiosulphate, the medical community in Bhopal ignored this recommendation.

The recent scientific advances in the field of reproduction like amniocentesis, chorion villi biopsy (CVB) are calling into question the philosophy and values of medical ethics. Those techniques which were meant to detect genetic deformities are now being widely used for sex-determination. Not a single doctor has been prosecuted by the medical council.

These are just few of the examples where not only doctors but government institutions have flagrantly violated the various international and national codes. And yet nothing has been done and the medical system continues to devour and maim a large number of people.

The extent to which the medical profession will conform to proper standards of medical care will depend to a large degree on the development of the public's awareness of the issue. The basic rules of social conduct can be ensured only if the public maintains a constant and vigilant eye on the doctors in particular and the functioning of the health care system in general. It is only then that the doctors will be forced to abide by the highest standards of medical practice.

(Contd from page 87)

selective abortion of female foetuses could continue unabated. The callous and blatant attitude of the medical profession towards this question can be illustrated through a front-page advertisement appearing in one of the city's eveningers barely five days after the Maharashtra government's triumphant declaration of intent on January 1. This advertisement read in bold type, "Boy or Girl? Contact. . . clinic." A proposed legislation that will, in all likelihood ban such blatant advertising did not deter the doctor couple offering sex determining facilities. It must not be forgotten that, though pushed into a corner on several occasions, the medical profession refused to take an ethical stand before the government's declaration of bringing in such legislation. Apart from the high level of vigilance, a commitment from an ambivalent medical profession, faced with the loss of quick commercial gains, is a must.

(Contd from page 90)

the groups should utilise the avenues available to participate in the implementation process, in order to expose the hollowness of the bill.

The medical establishment had earlier argued that a law would force female foeticide underground. Now they have, in collaboration with the government, brought a law which can partially keep female foeticide above ground, within the purview of law. There is no alternative but to continue struggle against the medical practice of female foeticide.

[This Bill has been passed in the Maharashtra Assembly without any significant amendment in April 1988].

SCIENCE AS CULTURE
Edited by Les Levidow

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Fee for Service in Maharashtra Hospitals

It is not surprising that the Government of Maharashtra has been the first to introduce fee-for-service medical care in all district and Government medical College hospitals from February 9 this year. The trend had started long back: the Municipal Corporation dispensaries and hospitals hiked the OPD case paper charges over a year ago with no significant resistance from any corner. But now the fee-for-service will be and is being charged at a higher rate not only for the OPD and indoor case papers, also for each component of the service availed of by the patient. The outdoor case paper now costs Rs.2 instead of 10 paise for seven days' treatment, and for indoor patients the charge is Rs.5 per day (in addition Rs. 3 per day are charged for diet). For laboratory investigations the charges are: Rs.5 for routine blood, Rs.10 for urine, stool, sputum, ESR, malaria and filaria, Rs.5 for MMR and screening, Rs.20 for standard X-ray. For operations, the charges are: Rs.120 for major operations, Rs.50 for minor operations done in minor OT., Rs.10 for minor operations done in the OPD without anaesthesia. For deliveries in these hospitals, family planning disincentives are applied: Rs.20 for third and subsequent deliveries.

The virtues of fee-for-service have been rigorously propagated in Maharashtra for the last one and a half decades. The political and economic crisis of the Indian rulers, which began to manifest itself from the late 1960s, was reflected acutely in the health-care sector. The experimentation primarily with the support of foreign funding agencies which led later to the formulation of international and national strategies for the primary health-care and the health for all had begun as early as the late 1960s and the early 1970s. All these experiments were meant to develop a strategy without radically changing the health-care structure and so also the social structure and without demanding any extra resources from the state to provide some basic health care to the people.

As these experiments grew under the 'care' of NGOs and voluntary agencies all over India, particularly in Maharashtra, they exerted a strong influence on government policy-making. Many of them attributed their success in people's participation to their policy of charging for services, albeit charging at low price. While attacking government policy of providing free services, it was argued that people do not appreciate services when provided free and there is a wastage of resources, as people misuse and overuse government services. They did not stop here. They even carried out some studies showing that the community is ready to pay for the services from the village health worker level to the hospital level. Thus evolved a strong case for the 'community financing' of health-care.

In this context, two points should be noted. Firstly, the majority of the NGO experiments were and are being carried out noy in the developed districts but in the underdeveloped areas (Jesani, Duggal, Gupte, 19). Therefore, in these areas the penetration of commodity relations is very pronounced. The NGOs' policy only took it further. Secondly, corruption and malpractices in the government sector are so rampant that they have already become institutionalised. The PHCs are no longer exclusive free service institutions nor were the district and the medical college hospitals before the February 1988 order. In a very significant number of them private practice by doctors both inside as well as outside the institution is the norm rather than the exception. In fact, about 25 per cent of PHCs and all rural hospitals and district hospitals officially allow doctors to do private practice, although not within the institution. Therefore, a fee-for-service atmosphere and value system has existed for long in the government sector. The health bureaucracy too believes in and encourages this state of affairs.

However, despite corruption and malpractice, poor were able to avail of some services, though it was second grade as doctors used to be more concerned about those patients who were either VIPs or used to fill their pockets. Now with the government becoming a 'private practitioner', even this second grade service is no longer available to the poor. The provision of providing free treatment to 40 per cent of patients is an eyewash, as it is at the discretion of the civil surgeon and the superintendent, who neither have inclination nor time to indentify such needy patients. Undoubtedly the government has in one stroke thrown overboard the fundamental recommendation of the Bhore Committee (1946) that health care should be available to people irrespective of their ability to pay.

Ironically enough privatisation of health

financing has take place in the context of the much lauded primary health-care and health for all. Certainly, privatisation does not necessarily and logically flow from the basic principles of primary health care. But when the PHC approach is articulated within backward capitalism which has historically, in our country, encouraged private sector through public sector resources, and at a time when the private health sector is attempting to expand its sphere of operation, it could generate a dynamic towards privatisation unless the PHC approach is combined with a vociferous demand for complete nationalisation of health-care services and allied drug and instruments industry.

Moreover the demand for low cost health-care must be made secondary to the demand for a National Health Service. In a climate where the private sector is allowed and given concessions to establish hi-tech medical care and the government hospitals in the urban areas—especially those also catering to the VVIPs—following the same line, people's expectation and aspiration to be treated with the best of medical tools will naturally increase. This is irrespective of whether the so-called best is really the best or not, rational or not and even appropriate or not. This climate decisively undermines the basis of primary health-care approach and it will be regarded as a second grade service by the people. Thus while one must continue to work for rational medical practice—even show to the government how resources could be saved by having rational medical practices in our hospitals (as against charging for services to meet demands)—unless low-cost medical care is propagated with a demand for an NHS, the PHS approach may well turn out to be self-defeating.

—ACJ

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Norplant: 'The Five-Year Needle'

An Investigation of the Bangladesh Trial

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Norplant, a contraceptive subermal implant was introduced for clinical trials in Bangladesh as early as 1981. However, partly because of resistance from conscious groups the trial was abandoned. Four years later, the Bangladesh Fertility Research Programme with other international organisations and a pharmaceutical company once again initiated the trial. This is a report of investigations conducted by a concerned group in Bangladesh.

NORPLANT is the registered trade mark of the Population Council for contracepive subdermal implants. It consists of flexible, nonbiodegradable tubes filled with levonorgestrel, a synthetic hormone of the progestin family. The implants are placed under the skin on the inside of a woman's upper or lower arm. The hormone is slowly released at an almost constant rate for several years.

Norplant implants come in two form. The first, called simply Norplant consists of six hollow silastic (silicone rubber) capsules, each capsule is 34 mm long, with a diameter of 2.4 mm, and contains 36 mg levonorgestrel. The ends of the capsules are sealed shut with silastic adhesive. This is the most widely used of the two systems. In Bangladesh, this system is being used.

The other system called Norplant-2, consists of two solid silastic rods, each 44 mm long. A total of 70 mg levonorgestrel is dispersed in the matrix of each rod. (PRS, 1987).

The promoters of the system are a coalition of hetrogeneous partners, (1) Population Council, New York, USA working through its International Committee for Contraceptive Research (ICCR) and (2) Leires Pharmaceuticals Company, Finland. In Bangladesh the preintroductory trial is being carried out by Population Council and Family Health International (FHI) through the Bangladesh Fertility Research Programme (BFRP).

Norplant Trial in Bangladesh

In this section we shall provide some information regarding the history of Norplant trial in Bangladesh which began as early as 1981.

The 16th meeting of the National Council for Population Control and Family Planning was held on February 7, 1981 at Bangabhavan and was presided over by the late president Ziaur Rahman. In this meeting, among other matters, it was discussed that, Norplant, a sub-dermal contraceptive which is easier and more effective than sterilisation should be introduced on a trial basis (National Council, 1981). Accordingly, a steering committee was formed on Norplant for introduction and examination of suitability and acceptability in Bangladesh. In August 22, 1981 a meeting of the subvention committee, Population Control and Family Planning Division, was held. The meeting considered the project proposal of BFRP on 'Clinical Study of Norplant Reversible Hormone Implant Contraception'. It was approved in principle and a sum of Tk. 7,43,000 including US 20,000 in foreign exchange was recommended for the project to be paid in phases. On October 4, 1981, BRFP put an advertisement in the *Bangladesh Observer and Holiday*, a daily and weekly newspaper respectively:

> A new birth control method
>
> **NORPLANT**
>
> *A wonderful innovation of modern science*
>
> - This method is for women
> - This can be implanted under the skin of arm
> - This will ensure sterility for 5 years
> - When removed, can have child again.
>
> Get more information:
>
> **Bangladesh Fertility Research Programme**
> 3/7, Asad Avenue, (1st Floor), Mohammadpur, Dhaka.

Immediately, there was resistance from conscious groups who pointed out the unethical aspect of the advertisement. An article was published on October 25, 1981, where several issues were raised. A brief text of the article is presented below:

> . . . So far as we know through reliable sources that the Technical Advisory Committee in Bangladesh did not approve its use in Bangladesh. However, the BFRP has successfully bypassed the Technical Advisory Committee and announced and advertised its use.
>
> It should be noted here that the BFRP was also the pioneer in using Depo-provera and Norigest in Bangladesh.
>
> Finally, some comments on the BFRP advertisement for Norplant.
>
> First, the advertisement syas "*Norplant-a wonderful innovation of modern science*" Hard to believe because we do not have any scientific evidence.
>
> Secondly, *the method is for use by women*. As women are politically less dangerous.
>
> Thirdly, *it will be implemented under the skin of the arm*. Will ensure identification for coercion.
>
> Fourthly, *this method will ensure infertility for five years*: A safe method for the population controllers and not the users.
>
> Fifthly, *when removed will ensure fertility again*: Nobody knows (Norplant, 1981).

The trial was then postponed, as it was known through sources in government that the Population Council was not interested in being involved with controversial issues. A group of 151 doctors and pharmacists made a petition to the minister for health and population control to stop such an unethical trial. This part of the information seems to be lost in the present document of BFRP. There is no mention of the attempt of the trial in 1981. The BFRP documents now shows that they have initiated the clinical trial on Norplant in February 1985 under the financial and technical assistance

from Population Council and Family Health International (FHI) (FERP, 1986).

In an article by Dr. Halida Hanum Akhter, the present director of BFRP, it was mentioned that the BFRP has initiated the study after obtaining clearance from the Directorate of Drug Administration "to assess the acceptability and effectiveness of the new method among Bangladeshi women through government controlled hospitals and clinics such as the Institute of Post Graduate Medicine and Research (IPGMR), Dhaka Medical College Hospital (DMCH) and Mohammadpur Fertility services and Training Centre (MFSTC)" (*New Nation, 1987*).

> Earlier BFRP had obtained clearance from its 19 member executive council headed by the secretary ministry of health and family planning and consisting of members from various government and non-government research organisations. University departments and ob gyn departments of medical colleges.
>
> The advisory committee was constituted by the Bangladesh government in February, 1985 to make major policy decision relating to the clinical trials and use of Norplant as a contraceptive, to decide the mode of Norplant study and monitor the acceptability of the new method of female contraception and to decide on the use of Norplant in large scale in the family planning programme cleared the use of Norplant in Bangladesh. . . .The BFRP initiated the pre-introduction clinical trials only after the World Health Organisation decided at its Special Technical Review in November, 1984 that the Norplant was an effective and reversible, long-term birth control method which has proved to be superior to all other reversible methods.
>
> It has been found by researchers that contraceptive pills containing progestin and more commonly used other reversible methods necessitate continuous motivational involvement by the user. In a country like Bangladesh this fact is more true than in the developed world. It is, therefore, necessary to introduce methods in Bangladesh which can continue to be effective for long periods without continuous motivation by Family Planning Workers. Norplant is perhaps the most effective method which is likely to prove successful here.

The articles does not say anything about the study on the safety aspects of the research. Again, when BFRP is quoting the WHO special Technical Review decision (which also says nothing about safety) it only emphasises the effectivity and the superiority over other methods.

The BFRP protocol of research does not have the objective of looking into the safety aspects of the method. An effective method means that the method can ensure birth control; but it does not necessarily mean that by being effective it is safe for user's health. The safety aspects are directly relavant for women's health, while the effectivity only deals with population control programme aspects.

It is interesting to note that even before BFRP undertook the trial in February 1985, the Third Five Year Plan had incorporated the use of Norplant. It says:

> This long lasting method has the potential advantage of not requiring day-to-day use and therefore may be particularly suitable for our *semi-literate* population. It is proposed to introduce this method initially on trial basis, and the programme for its wider use can be decided according to the experience of the trial (TFUR, 1985). Here again, the effectivity question is mentioned and is specially targetted towards the semi-literature population, in other words, the poorer section of the population, so that population control can be ensured.

The BFRP had started promoting Norplant even before the trial was completed. While the trial began in 1985, the BFRP started making the following claims:

> The Norplant contraceptive system is suitable for most women of reproductive age. (BFRP, 1986).

Norplant is a contraceptive system which is still under scientific investigation or trial. Because of the known and unknown health hazards of administering long acting hormonal implants scientists and women's groups all over the world as well as concerned individuals are resisting even the trial of this system. The trial was attempted secretly in Brazil. Later when it became a public scandal and had started facing resistance the experimentation was stopped.

It is important to briefly state the scientific status of Norplant. Here's a critique of the 'Facts About an Implantable Contraceptive' published in the *Bulletin of the World Health Organisation* 63(3): 485-494 (1985).

A. *Insufficient Animal Experiment*:

1. Levonorgestrol and the half as actived, l norgestrol isomer are used interchangeably. Only the investigations referring to levonorgestrol are relevant. The interchangeable use of the two substances is confusing, and it is not known how far results for one substance are valid for the other substance.

2. The comparison of the doses given to animals and humans is misleading because there are big differences in the bioavailability and terminal half lives of the drugs between different species.

Table 1: Bioavailability and Terminal Half Life of Drug between Species

Species	Bioavailability	Terminal Half Life
Rat	9	0.5
Dog (Beagle)	22-6	1.2-0.3
Rhesus Monkey	9-4	4.4-0.5
Women	100	26.4-72

3. Although it is accepted that the beagle bitch is an unsuitable model for studying progestagins, experiments with this animal are included and no replacement experiments were carried out.

4. In the majority of experiments d, 1/levonorgestrol was given by the oral route. The comparison with implanted doeses is misleading because there is a difference in bioavailability.

5. Experiments are included which were carried out for approval as an oral contraceptive.

6. Although the rat appears to be a poor model for the testing of implants (local sarcomas) it is nevertheless used in animal experiments.

B. *Insufficient Clinical Research*:

1. The effect of Norplant on lipid metabolism—the experiments carried out to date are contradictory. Fat metabolism is associated with the development of cardiac problems.

2. The relationship between Norplant use and an abnormal glucose tolerance test. (This was only examined in six women according to WHO report.)

3. The safety of long term use of Norplant.

4. The effect of Norplant on blood coagulation.

5. The use of Norplant during lactation. Its effect on the growth and development of the child.

6. The use of Norplant during pregnancy.

7. The effect of Norplant on the levels of testosterone and rostenedione. The experiments carried out to date are contradictory.

8. The effect of Norplant on systolic and diastolic blood pressure in the fourth and fifth year of use.

C. *Inadequacy of Relevant Area of Investigation*:

1. In general, investigations were carried out with young, healthy, non-smokers. By 'healthy' is understood: without cardiovascular disease, without diabetes (also preferably not in the family), not overweight, without liver disease. Common causes of this are alcohol and poor nutrition. Women who had used injectable contraceptives were eliminated from some experimental series. Thus, not a good cross section of the population.

2. Frequently results are compared with those of women who use oral contraceptives, instead of comparison with women who use no hormonal contraception.

3. Some side effects (although not frequent ones) were not included in the WHO report. More implants were removed as a result of 'other medical reasons' than because of menstrual problems (6.5 per cent of 5.6 per cent), while menstrual problems occur more frequently. Some of these side effects are depression (1 per cent), more then 10 kg weight loss (2 per cent in Thailand); and epilepsy. (study in family planning).

Therefore, the claim of suitability for most women of reproductive age is not based on facts and is misleading.

UBINIG's Involvement in Study

Since 1981 UBINIG has raised the question of ethics of the research which is conducted on human beings. There are specified guidelines for bio-medical research, which must be followed. But it has been observed that the research ethics was violated in several ways. UBINIG's main concern is the health of women and that women, specially the poorer women, because of their vulnerable condition, should not become the victims of such research. From this commitment UBINIG has always pointed out the lapses found in the research in order to improve the situation.

In 1985, UBINIG was informed of the trial on Norplant by a development worker working with women in the slum areas of Dhaka city. She wrote a brief account of her experience with the trial:

> One of our group members (Jahanara) had four children. She became pregnant again and was worried. She went to several family planning centres for abortion (MR), but failed. Finally she told me everything and sought my help.
>
> On 15th December, 1985 I took her to Mohammadpur Fertility Clinic for MR services. We were told that abortion cannot be done because it is already 11 weeks of pregnancy. But soon they said that MR can only be done if she takes ligation operation simultaneously. Jahanara did not want to take ligation. So she was refused by the centre.
>
> I, then, took her to the medical college and met with the counsellor. Jahanara told the counsellor that she would prefer to take an IUD (plastic coil) after the MR. She said that she would not be able to take rest at least for three days after the ligation operation. She has to work. So it is better not to do it now. Then the counsellor told her about an injection. I remembered the side-effects about injectables so I said injections have possible side-effects. The counsellor said: "You are talking about injectables with 2/3 months duration. But here is another injectable which is of 5 years duration. It does not have any side-effects.
>
> I was confused, because earlier I heard of Norplant which is of 5 years duration, but the counsellor did not say that it was Norplant. During our conversation, the counsellor opened up a form and asked Jahanara to put her fingerprint on the paper. I could read what was written in it, although the counsellor did not make any effort to read the text to Jahanara which was meant for her. It said: I am completely aware of the method of menstrual regulation. I know about the problem such as infection, bleeding and peforation of uterus and yet I have requested for the MR.
>
> Jahanara put her fingerprint on the paper without knowing what was written on it.
>
> Then we came downstairs. I saw that several clients were sitting, while two motivators were trying to motivate the clients. A doctor came out of the room and asked. "Did you find a client." The motivators said, "No". The doctor said, "Try to motivate them".
>
> I asked the motivators about the 5-year injectables. They said that it was called Norplant. They also informed me that it is given in the PG hospital, the medical college and Mohammadpur Fertility Clinic and through Dr. Firoza Begum. They also mentioned that Norplant was being given through some private clinics. I became very worried and went to the room where Jahanara had her MR. I told her not to take Norplant. The I went to the doctor and requested her to let us go on that day. We would come back later. In this way Jahanara was saved from Norplant.

After this, we tried to find out more about Norplant. UBINIG research team found that most of the clients in the PG hospital were being motivated for accepting Norplant. However, they were found to have been asked questions such as, whether the woman was a lactating mother or not. One Aya thought that the research team was there as client. She suggested that if they take Norplant, then they could be given Tk 30.00 [app. Rs 60] and some medicine during the first visit. The client could come back in case of any problem and would receive Tk. 30 and medicine. In the PG hospital, we collected a leaflet which was distributed to the clients. The leaflet said:

Facts About Norplant

1. Norplant is a new temporary family family planning method. It is effective for 5 years.
2. Its use is relatively easier.
3. It is given under the skin of the arm with an injection needle.
4. Generally the side-effects of this method are less than that of the pill.
5. It is 100 per cent effective as sterilisation.
6. The user can take out the norplant whenever she wants.
7. The return of fertility after taking out Norplant is after one year.
8. It is possible to carry out normal movement and works when it is in the body.
9. There is no need of taking any other method when the method is in use.
10. The doctor will examine the client before the method is given.

To know more about Norplant, contact the doctor

(Collected From IPGMR on December 24, 1985.)

If we evaluate the points mentioned in the leaflet, we find that it actually violates the ethics by providing false information to the clients. A few examples of the falsity of the information are given below:

Point 1: The claim of effectiveness is not completely true, because according to BFRP newsletter the rate of accidental pregnancies during the first year was 0.4 pregnancies per 1000 users. The WHO records indicate a gross cumulative pregnancy rate at 5 years of 2.6 per 100 women years. The annual pregnancy rate during the first 5 years ranged from 0.2 to 1.3. ('Facts about an Implantable Contraceptive', *WHO Bulletin* 63(3) p. 485-494 (1985).)

Point 2: Its use is not easier because it needs surgical approach to put the capsules under the skin. The WHO recommends that to minimise the risk of infection, both insertion and removal should be performed in a clinical setting. It is of utmost importance that sterile techniques be maintained throughout both procedures.

The above two examples also indicate the violation of ethics by trying to motivate women with false information.

We have tried to collect more information but were not

successful because of the non-cooperation from the research organisations. In November 1986, a conference was organised by BFRP on "Contraceptive Technology Update", among other issues. Norplant research was discussed. A preliminary report was presented by S. Firoza Begum. According to her report 600 clients were admitted under the study within the period February 1985 to April 1986, but the total number that remained in the period Jan-April 1986 was 187 i.e. 31 per cent of all those admitted. She listed a number of reasons for removal. (Table 2).

From the users' satisfaction point of view Firoza Begum had pointed out that 40 per cent have liked the method because it lasts for 5 years, while 30.7 per cent liked it for easiness. About 56 per cent disliked it because of its effects on the change in menstrual pattern. 82 per cent have said that they have received 'enough' information about the method, while 17.8 per cent have not. One wonders what 'enough' means. If the above leaflet is the only source of information it cannot reach all the users because many of them are illiterate.

UBINIG Study on Norplant Clients

We found out the clients of Norplant during our study on the injectables in urban slum areas. In the area of Mohammadpur, Tikkapara slum we identified women who have taken injectables. We also went to Basila village which is a semi-urban village and found a number of injectable clients. During the interview we discovered one injectable client with Norplant. The client told us that she has taken a 'five-year needle'. Then she showed her arm having the capsules. Gradually we found more women in the same village who have taken the 'Five-Year Needle'. We have interviewed 10 women who have taken Norplant.

Three centres were visted by the UBINIG research team in order to get information about the trial. These centres are: (1) Mohammadpur Fertility Services and Training Centre, commonly known as Mohammadpur Model Clinic or the Mohammadpur Fertility Centre; (2) Dhaka Medical College Hospital, DMCH; (3) Institute of Post Graduate Medicine and Research, IPGMR.

Table 2: Reasons for Removal

Reasons	(N=32) No	Per Cent
1. Pregnancy Related:		
Luteals Phase*	2	6.2
Planned Pregnancy	1	3.1
2. Change in Menstrual Pattern:		
Amenorrhoea	4	12.5
Polymenorrhoea	6	18.8
Menorrhagia	2	6.2
Irregular Bleeding/Spotting	5	15.6
3. Medical Reasons:		
Body Pain	1	3.1
Headache/Nausea/Burning Sensation	3	9.4
Loss of Libido	2	6.2
Weight Gain	1	3.1
Serum Hepatitis	1	3.1
Infection at Insertion Site	1	3.1
Jaundice	1	3.1
4. Personal Reasons:		
Husband Eent Abroad	2	6.2

* In these two cases women were pregnant at the time of admission.
Source: Report of Firoza Begaum (1986).

The information obtained from (1) Dr. Hosna Ara Ali, deputy director and Ms. Pervin (a family planning worker) in the Mohammadpur Model Clinic, (2) Dr. Kohinoor, gynaec specialist and directly working with the Norplant study in Dhaka Medical College Hospital and Ms. Nadira Begum, a family planning counseller in IPGMR.

It was known that about 616 women were given Norplant in three centres. Except in IPGMR the other two centres had 200 clients each, while in IPGMR it was 216. The counsellor reported that another 14 clients will be given Norplant within one month of the interview (i.e. January 1988).

Information received from Mohammadpur Model Clinic shows that the age range of the clients is between 18 and 40 years. The Norplant is given within 1-7 days of menstruation. Women who are not breast feeding their babies are given the method. All medical check-up is done for the clients so that no disease such as jaundice, hypertension, diabetes is found in her. If the clients fall sick after the use of the method then it is taken out and she is admitted to the hospital.

The follow-up is done within 1.3 and 6 months of insertion. Those who have taken Norplant have come from Dhaka mostly, although a few have gone to Chittagong and Comilla after the insertion. However, they have stopped inserting any further Norplant since last one year.

In the Dhaka Medical College, the criteria of the Norplant receipients in terms of age was same as the other two centres i.e. between 18 and 40 years. In addition to that, the gynaec specialist said that one should use Norplant after one child is born. The breastfeeding mothers should not use it, because according to Dr. Kohinoor, "the hormone which is in Norplant may pass from mother to the child through breastmilk and can cause harmful affects on the baby." In response to the question, how do they get the clients Dr. Kohinoor said, "When women come here for taking a contraceptive method we give them a leaflet where the good and bad effects of Norplant use are written. But the women must get the consent of their husband". About follow-up she said that each and every client has a card. If the women do not turn up for follow-up care then workers go and visit them at their homes.

No insertion is made without complete medical checkups. Those who have hypertension should not be given, nor those having jaundice and diabetes.

As for side-effects, the most common side-effect is amenorrhoea. "However, this is not a serious side-effect", she said. "It is better for the health to have amenorrhoea. Because it saves the blood which would have gone through menstruation every month. Therefore there is no chance of having anaemia. You know these women are already malnutritioned Norplant is better for their health." she added. According to her 95 per cent of the clients belong to very poor class. "They are responsible for giving 4 to 5 births each. Since they cannot remember to take birth control method, like pills, every day, long acting methods are better for them. On the other hand, women in the upper class are intelligent and can take any other method".

Finally she said, "In order to get a good th[illegible] trade off. If 2/3 women die what's the n[illegible]ning there is a tion will reduce and 70 per ce[illegible] problem? The popula- successful. In every bir[illegible]ent of our research has been bad sides. This [illegible] control method there are good and [illegible] nas, too."

The doctor in the PG hospital has only joined recently, so she could not give much information.

Every centre we visited referred us to BFRP. But BFRP refused to give information on the ground that we will 'misinterpret them'. We have requested the director in writing.

Profile of Norplant Users

Below we shall provide a brief picture of the users of Norplant in the village Basila, in Dhaka city. There were 10 women, who were found to take Norplant from Mohammadpur Fertility Centre.

(i) *Economic Condition*: According to the information available about occupation of the husbands of users, and by direct observation of their household conditions, the economic status of the users is poor (6) and lower middle (4). Those who are poor are working as boatmen, fish sellers, day labour and small business. The average daily income is Tk. 40.00 to Tk. 50.00. They have no land and have to depend on selling labour for earing their livelihood. The lower middle families are mainly engaged in small business such as rice and groceries. The families are also found to be involved in briek business.

(ii) *Education*: Eight out of 10 users are illiterate; one has read upto primary level, and another has got secondary education.

(iii) *Age*: Two users are in the age range of 15-20 years, three are in 26-30 years, one is in 31-34 years and four users over 35 years of age. The highest age was found to be 45 years, while the lowest age is 18 years.

The age was determined by our investigators by asking the user about her age; about the age at marriage; about her menstrual situation at the time of marriage and about the age of her first child.

All this information together helped the investigators to come to a figure for age of the user. This age information is more or less accurate. In the centres where Norplant is given, the age limit is said to be 18 to 40 years and is noted only by asking the user about her age. In our sample, we find that a woman over 40 years has been given the method.

It is interesting to note that the draft protocol of the Norplant study does not say anything about age of the users. Moreover, the preliminary report submitted by Firoza Begum does not mention anything about the age level of the 600 users of Norplant. The question is whether the researchers are not taking the issue of "age of the user" as an important criterion of the research, whereas Norplant as a "long-acting contraceptive" method must have a limit for age for the method to be effective.

(iv) *Marriage and Child Birth Information*: (a) Duration of married life: Six women had a long married life of 20 to 30 years, while others had between 10 and 20 years. Only 2 young women were married in 1981. It is somewhat related to the age of the user. Most of the users (8) were married at an age of 13 to 16 years, and only 2 were married at the age of 18 years.

(b) Number of living children and children ever born: The average number of children for all the users (N=10) is 43, while maximum number is 8 and minimum is one child. As is known from national statistics, the number of child births is higher than the number of living children. The average number of child births is 4.7 (the maximum is 9).

c) Age at first child birth: Three women have got children before they reached 15 years, while 7 had children between 16 and 20 years of age.

(d) Time gap of first child birth and marriage: Five women got children only after a year of marriage, 4 had between 2 and 3 years and one had 5 years of time gap after marriage before the first child birth.

(e) Average gaps between child birth: The average gap between child births were found to be 2.1 years, with 4 years as the maximum gap.

(v) *Information on Contraceptive Acceptance*: Except 3, seven users have accepted other methods before taking Norplant. These other methods are pill and injection. Norplant has been used as a method of switch from other methods or other methods were taken after Norplant use. This is shown in Table 3.

Table 3: Use of Norplant and Other Methods

Category	No of Users
I Norplant as the first method and no switch	3
II Norplant as the first method but switched to other methods	1
III Norplant after using other methods	6

That is most of the users have switched to Norplant as a change of contraceptive method from other methods. One woman in the category II has already changed from Norplant to other method such as pill. In category I, one woman has taken off Norplant and has not taken any other method. In category III, one women has taken off Norplant. Out of 10, the drop out of Norplant is 3.

Those who used other methods have started using the methods since 1976. The Norplant was given in 1985. Only one woman has taken Norplant in 1986.

(vi) *Present Health Condition of User*: We have taken weight, height, blood pressure, pulse, anaemia etc. as minimum indications of health condition of the user. We shall provide the information in terms of average and maximum and minimum figures.

Height:	Average	4.11	
	Maximum	5.1	N=10
	Minimum	4.9	
Weight:	Average	42.3 kg	
	Maximum	48.0 kg	N=10
	Minimum	38.0 kg	
Blood pressure:		90/60	N=10
	Minimum Normal Level		
Plus rate:	65-80 per minute	5	N=10
	More than 80 per minute	5	
Anaemics:	Normal	2	
	Mild anaemic	2	N=10
	Moderate anaemic	4	
	Severe anaemic	2	

(vii) *Health Condition before Use of Norplant*: We have asked questions whether they had any specific health problems before the use of Norplant, we got the following response.

There was no problem	8	
Irregular Menstruation	2	N=10

That is, women having amenorrhoea and irregular menstruation were given Norplant, which aggravated their problem

even further. We could not however get information on health conditions for which Norplant is contraindicated such as jaundice, diabetes etc. So we abstain from making any analysis of it.

(viii) *Health Conditions after Use of Norplant*: All the 10 Norplant users were facing problems since they have taken Norplant. These were as they have expressed.

"No menstruation since 1 to 1½ years."

"Once menstruation is started continues for 15 to 20 days."

"Irregular bleeding, spotting" etc.

In addition to this the other problems are loss of apetite, vertigo, burning feeling in hand and feet, body ache, weakness, leucorrhoea, etc. If we order the health complaints in terms of the frequency of reporting, then the following pattern emerges:

	N=10
1. Amenorrhoea*	10
2. Irregular menstruation	4
3. Burning sensation	3
4. Excessive Bleeding, White Discharge, Body ache	2
5. Tiredness	1

* Almost all the clients suffered from amenorrhoea for different periods of time and most of them developed irregular or excessive bleeding in between.

Here by amenorrhoea is meant long period without menstruation, even more than 45 days. According to some clients they had no menstruation for one year or more.

A few examples of the users' complaints:

(a) "After I have taken the "Six" (the needle), I felt aches in my body after six months. I cannot look up, I do not have any apetite, I am going to die. The menstruation is very irregular, and during last Shabe-Barat (a religious occasion) I had menstruation for 2 months at a stretch", Anwara Khatun (30 years).

b. "I did not get menstruation for 2 year since I have taken this 5 year needle. Now I have aches in my hands, legs; I feel weak, I cannot explain; it is a terrible feeling", Fulbanu (35 years).

c. "Since I have taken the needle, I get menstruation which continues for 12 + 13 days together. When I took the 3 month needle, I had regular menstruation but now I had bleeding; clots of bloods going at the time of menstruation. I feel pain in the body. I put kerosene oil on my body; when I go near the stove to cook, I see things double. I cannot go near the fire". Nawab Banu (38 years).

Three women who could not tolerate the problems insisted on taking the Norplant off, and finally could succeed in convincing the centre to take it off.

For health problems, the users have gone to the centre to express the problems, but they were given only 30 vitamin tablets and in some cases a prescription to buy medicine from outside. No other treatment was done from the centre. But they had to go to some doctor. For example 2 have gone to a qualified allopath doctor, 3 have gone to traditional healers, called the kabiraj, and one to a quack allopath doctor. Five women did not go to any doctor because they did not have the money to spend.

(ix) *How was Norplant Taken by Users?*: The users first heard of injectables, the 3 month dose, from the family planning workers but later they heard from the neighbours that there is a needle for 5 years. They heard that it was better than the 3 month injection so it would be better for them to take the 5 year needle instead of the 3 month one. From their village, it is difficult to go to the centre frequently, so it was better if they could have a method of 5-year duration. One woman said that every woman goes to take Norplant is asked to talk about the benefits of Norplant to their neighbour, and that they should send their neighbours to take the method. None of the user has mentioned that they were using the method as a trial. The only information which was given to the clients was that Norplant was a 'needle for 5 years'.

(x) *State of Lactation, Pregnancy and Affects by other Contraceptives*: We have received information which is vital before a contraceptive like Norplant is taken by women. Table 4 is the representaton of the situation.

Table 4: Status of Women before Taking Norplant

State of Client's Condition at the Time of Norplant Acceptance	Number of Clients
Breastfeeding	3
Pregnant	0
Already had problems due to use of other contraceptive methods	1
Both breastfeeding and affected by other methods	3
None	3

Six out of 10 women were breastfeeding out of which two women had a child below one year of age. One of these clients had her last baby with the age of 1½ months only. Four women were still breastfeeding their child even though the child was over 1 year of age. In Bangladesh, the average length of breastfeeding is about 18 months.

Table 5 shows that there is no sign of using Norplant as a trial, it is used as a contraceptive method, like the injectables, IUD etc. The clients are not included under the trial with their informed consent nor any proper care is being taken for the health problems of the clients. However, the centres are selectively doing urine tests for some clients and not all of them. It is assumed that they want to eliminate the cases where the women are not coming within 1-7 days of menstruation. By urine tests they want to be sure about pregnancy.

Here again, the evidence suggest that the rules for trial were not followed although the workers are found to be aware of certain rules. Violations are particularly made in taking informed consent, in the selection of clients for the method and in the follow-up care. Information on the monetary incentives for follow-up monitoring was received from IPGMR Hospital. The doctor told us that they give Tk. 20.00 to each client for motivating the clients for visiting the centre for follow-up monitoring. They also reported that the clients are given Tk. 50.00 at the time of first insertion of the method. While the centres try to motivate the clients to come for follow-up visits the clients reported the contrary. According to the clients, there was rather discouragement for reporting health problems. The centre workers are friendly in their attitude before insertion of the method, but afterwards 'they do not even want to talk'. The family planning workers at the centre do not appreciate the clients' health problems at all and they also do not want to take it off. Since the method is clinical, and the clients cannot take it off by themselves, they feel helpless and therefore have to go to the centre and plead for taking off the method. It is upto the decision of the workers whether it would be taken off or not. This is

a helpless situation for the clients.

The clients also become discouraged to go to the centre for follow-up care because they are not given any treatment. They are given 'slip' only i e, prescription. The centre workers says that there is no medicine for treatment of the clients.

Discussion

If the trial is for acceptability and effectivity, the methodology is inadequate to prove either. The research methodology is directed more towards getting women so that the method can be inserted. Women are not considered as a human and social being. Therefore, no information is being shared with her except the information which will only lead to the insertion.

Women who are motivated to take Norplant are supposed to be motivated with full knowledge of the method as a trial. This is not happening. This can be proved not only by the

Table 5: An Examination of Rules to be Followed for Trials

Rules	Whether It Was Followed by the Trial
a. Informing the clients about the method and that it is on trial	None of the sample clients know that the method was on trial. The information which was given to the clients was that: 'It is one of the contraceptive methods and it is of 5 years' duration'.
b. Informing the clients about the side-effects	Two clients were told that "there will be some disturbances in the menstruation cycle, either it will stop or may be there will be more bleeding. There will be no other problem". Two clients were asked to come "if there is any problem". One client was told that "if you take this needle, there will be no problem, but if you get sick, we will check". One client was asked to take milk, banana and other good food. Four clients were not given any information.
c. Taking consent of the clients after providing all the information	No information was found which will reveal that an informed consent was taken. The clients were not even told of the name of the method. Only one client knew that the method was called "Norplant" and the rest knew that it was a 5 year injection.
d. Pre-medical examination of the client	Urine test and blood pressure checking was done for 2 clients, weight and blood pressure was taken for 8 clients.
e. Medical support to clients having side-effects after taking the method	Six clients reported that when they went to the centre to report about their health problem, the centre gave them prescription on plain white paper and asked them to buy medicine from outside. According to a client, "I have gone to the centre 2-3 times, they gave us slips only and asked me to buy from outside. I asked them, why should I buy medicine from outside when I have taken the needle from here. I want my treatment to be done here. The big doctor told me that the govt. did not give medicine for us. If I talk about my health problems more, they suggest I go for ligation operation". One client was given 30 vitamin tablets, another client got pain killer tablets once.

Table 6: Discrepancy and Similarities Found in Information Given by Centre and Information Received from Clients

Centre	Clients
a. Norplant is given within 1-7 days of menstruation	All the clients reported of same time period after menstruation.
b. Women who are breast-feeding are not given the method	Six out of 10 users were breastfeeding at the time of taking Norplant.
c. Norplant is taken out as soon as any side-effect is noticed.	Three clients have taken out Norplant. But their experience is that the centre did not want to take it off for first 2-3 times. Then when they insisted further, then it was taken off. In the words of a client, "when I had problems, and could not bear it anymore, then I went to the centre, but they refused to take if off. They said why did you take it?" Next time I went and made a lie by saying that my two children are drowned in the river and my husband wants another child. This time they took it off. The rest seven clients are having side effects but the method is not taken off.
d. All pre-medical tests are done. These include checking of disease like hypertension, jaundice, asthma, etc.	The clients have reported only urine test, blood pressure checking, irregular p/v exam and weight as the premedical test done for them. But these were also not done for all the clients.
e. Norplant is given to women between 18 and 40 years of age.	One client was 16 years and one client was 45 years. The rest were within 18 to 40 years of age.
f. The follow-up procedure is the following: Ist follow-up after one month of insertion, 2nd and 3rd follow-up after three months of insertion. Fourth onwards follow-up in after six months of insertion. Dates of follow-up visits are written on the card. If they do not come then the centre workers go to the clients' houses to see how they are.	The clients reported that they are asked to go to the centre after every 2-3 months. They know that the date is written on the card, but they have not seen any worker coming to their houses for follow-up care.
g. A leaflet is made with the information of good and bad effects of Norplant. This is read out to the clients; and then if they decide to take it then the method is given.	No client has reported of such information
h. Women having post-partum amenohrroea, are not given Norplant.	All the 10 women who have received Norplant during normal menstruation cycle.
i. The clients must have at least one child at the time of taking Norplant.	The clients reported that they were asked about the number of children they have.
j. Those women who have taken pills, must wait six months before they take Norplant.	Two clients were taking pill before taking Norplant. One of them has taken Norplant only after 2 months of stopping pills.
k. Clients must get consent of their husbands before taking Norplant.	Only six clients have taken consent and four did not.

(Contd on page 108)

Obsession with Socialism

rohit j oza

I AM attempting underneath to answer some of Anant R.S.'s criticism (*RJH* II: 1-2, June-September, 1987) by quoting an article from the December 1987 issue of the Russian magazine *Sputnik*. The journal comments: "Problems posed by health service [in Soviet Union] of late have come in for criticism. The truth is that the health service has been obsessed by the quantity of services [the widely available and almost free medical care referred to by Anant] rather than quality of these services." Anant's reference to "these stupid civilisations [of capitalist countries] spending more on health-care" can be well answered by the *Sputnik* article and I quote "Health service has been dominated by conservatism in economic management, thus creating serious propblems". Further, the article says, "the success stories of principles of medical aid as practised in USSR should not be ignored. But what was good yesterday will not necessarily be found satisfactory tomorrow". As for Anant's attempt to locate "the indicator to find out what percentage of medical needs are being met and in what manner", the *Sputnik* article has quoted the USSR Minister of Public Health as saying, "we will dismiss specialists for whom medicine has been a random choice of career and who refuse to treat the job seriously". (And this, Anant, in spite of the Soviet Union's population of 1.2 million doctors—the largest number as compared to any country in the world.)

In the words of Anant: "A rough opinion in a proper direction is better than a precise obsessed opinion in a wrong direction." The "information" needed to "draw valid conclusions" is well provided in the *Sputnik* article: "By 1990 almost a million people will have died of lung cancer in the USSR and most of these smokers". (So much for the healthy Soviet way of life as compared to the unhealthy American way of life.)

With reference to the "wrong work environment and wrong social environment", Anant should note the following sentences in the *Sputnik* article: "A quarter of water supply is without adequate cleansing"; "from 1965 to 1985 the incidence of lung cancer doubled in Soviet Union"; "forty per cent of sixteen-year olds smoke"; and "medical specialists pay little attention to the propagation of a healthy way of life as a whole".

In the end, I would like to quote five more sentences from the *Sputnik* article to start, if possible, another 'Dialogue':

(1) "In Soviet Union, it is intended, by 1995, to double the volume of Pay Services available."
(2) "It is worth considering the question of large enterprises or big organisations paying at least partly for the treatment of their employees (workers)".
(3) "It would be just to levy a specific tax on smoking. Such additional charge (income) could be used for the treatment of smoking related diseases."
(4) "The present situation [in the Soviet Union] can no longer be tolerated by the party, the government and the people. Nor indeed by us in the medical profession."
(5) "The patient should also have a right to choose a doctor whom he trusts."

The Soviet Union is restructuring all spheres of its economy, culture and life. It is high time Anant also 'restructured' his obsessions. Remember, all that glitters is not gold.

(Contd from page 107)

10 samples but also from the discussion with the centre workers about their methodology. Therefore, it cannot be proved with the number of drop outs that once they realise the problems they are no more interested in it.

The follow-up monitoring is done to note down the problems but with little care of the clients. The problems such as amenorrhoea are found to be frequent, but the tendency of the centre is to justify the problem rather than giving remedies for it.

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Why Should We Learn to Read?

We are poor
very, very poor,
but we are not fools
That's how though we are illiterates
we are still alive

We tried becoming literate once,
We joined the literacy classes,
but felt after some time
that we are even more depressed.
that our understanding
of our situation
had not grown at all
Se we left the literacy class
because we are not fools.
only illiterates.

The people who taught us in the class know things
that we don't know,
in the same way as we know things
they don't know.
We have our own minds,
our own opinions.
our own ability to understand.
to question, to analyse.
We are not small children.
We are not fools, idiots, dumbells.
Just because we can't read
dosen't mean we don't know.

Perhaps that's something they can't comprehend
Yes—we are poor:
Not enough food to fill our bellies,
not enough clothes to cover ourselves,
and then there's the floods, the epidemics the riots...
But can education ever remove
these basic problems?
Will education feed us, cloth us?

We hear that the government has made schemes
to help us, the Poor
Why don't we know about them?
Will we be able to
increase our crop yield?
get interst-free loans?
get safe drinking water?
get our minimum wages?
These things are what we call' 'education',
That kind of education is relevant to us
(Not to you—but to us!)
If 'education' can offer us this
We will come.
If it is yet another broken promise
another fake hope
all we can say is

WHY DONT YOU LEAVE US ALONE?

—Satyen Moitra, New Delhi
translated from the Bengali.

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FIFTH ANNIVERSARY SPECIAL

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The views expressed in the signed articles do not necessarily reflect the views of the editors.

One Small Step

WITH this issue we complete four years of crowded life. As we begin a new volume we would like to share with you some of our experiences, some positive and some not so, in producing this journal. Also, we would like to collectively recollect how we began and why we launched a health quarterly at all in the first place.

As in any such venture, we too had some broad objectives in mind when we began. These objectives were evolved in response to a need many of us felt for such a platform in the context of the time. In the course of four years these objectives have themselves been re-examined — which we believe is a positive development. No journal can hope to survive without being conscious of changes in its milieu. At the same time it cannot afford to adapt itself too rapidly to every movement in its reference fabric. This creates a certain tension, the nature of which may be different for mainstream publishing and for the alternative media. *RJH* has generally been able to cope with this tension and work within it. Often some of the changes we make are mooted by pragmatism, and may not appear to further our goals. And this is why we are very much aware of the need to reflect on whatever has happened to us. This is not so much an exercise in self-criticism as a process of sharing our problems — which we are sure many other similar journals have experienced — and learning to deal with them.

In 1983 many of us independently began to feel the need for a forum for discussion and analysis of health issues from a left, marxist perspective. For one thing, since the 70s diverse groups with differing political and ideological perspectives had began to work in health as part of 'development' activities. Individuals in these groups through their work and exposure to ground realities had become sensitised and come to feel the need for a substantial radical critique of health. Also, political activists through their involvement in or exposure to health issues of working people had been forced to realise the importance of health in all its aspects to the practice of politics. Yet another factor was the emergence of the people's science movement, which although it had not at that time taken health as a major focus of its activities, had generated a sharp awareness of the need to critique establishment science including medicine.

What did we understand by a marxist approach to health and medicine ? As the editorial perspective in the first issue of the periodical pointed out, we meant an "analytical approach which takes a historical materialist and dialectical view of the health of people and the medical care system in a given social order." From this standpoint health was considered a part and consequence of economic, political and socio-cultural development of society. That is, "the problems of health and health care system reflect the problems of the dialectic of production forces and production relations and the broader social order based on it." At the same time we also acknowledged that there did not exist "one single marxist analysis — an all correct perfect line so to say of health and medicine." What the periodical hoped to do was to facilitate a continous interaction at the level of praxis amongst the different trends within the marxist movement.

However, we also agreed that there were other approaches or strands of analysis which had contributed to a radical understanding of health and health care. One such was the Ilichian which locates problems not so much in the socio-economic formation as in the bureaucracy and in the centralising tendency of capitalist development, faulting rather the trends towards industrialisation and urbanisation rather than the socio-economic system that engenders it. Similarly, the women's health movement in the west had pioneered the critique of the ideological structure of health care and the medical establishment and in doing so had rewritten in many ways the history of medicine. These we felt, would contribute to the development of marxist analysis of health.

But why did we need a separate journal for fulfilling these objectives? Couldn't existing left — journals or health periodicals serve the purpose? This was indeed an important issue since we did not want to merely add to the large number of periodicals unnecessarily, and secondly, many of us though not all, had our introduction to health issues in forums such as the **medico friend circle** which published some kind of periodicals. As the first editorial made clear, while other health periodicals would always remain useful in introducing individuals to a critical perspective on health, it may not be possible for them, or even appropriate, to initiate and continue a debate with a coherent political perspective, such as a marxist one. While the richness of the interaction between ideological perspective could not be underemphasised, the development of a marxist approach to health through these journals may not be feasible. As for other left oriented journals like the ***Economic and Political Weekly***, it was felt that since they covered all aspects of the analysis of society, it would not be possible for them, nor may they be so inclined as yet, to devote space to discussions and debates on health issues.

Thus was launched with great trepidation, the first issue of the ***Socialist Health Review*** in June 1984. In that one year not only had a collective of health and political activists from various parts of the country been formed, but we had also collected a small fund to cover costs through individual donations and pre-publication subscriptions. The response certainly surprised us and after the first few issues we were quite overwhelmed — we now have very few, a dozen perhaps, of the first issue on 'Politics and Health' and a few more

of the other issues except the second one, on Women and Health, and that was because it was reprinted with the help of a donation from a friend and well-wisher.

But even then, in spite of our euphoria, we recognised that if this response indicated anything at all, it was the need for such a periodical. And also that our survival was in equal parts due to the support of our readers many of whom encouraged us in several ways by recommending ***SHR*** to others, collecting subscriptions, sending donations and most importantly, writing enthusiastic letters to us and other factors, not the least of which was our 'discovery' of our first printers, **Omega**, who shared our burden in producing the journal, not only because they were such professionals, but because of their philosophical and ideological orientation.

For the first two years, ***SHR*** had a comparatively smooth run — there were of course financial problems, 'administrative' as well, because there were so few of us wanting to do so much (!) and other day-to-day troubles. (On one occasion, the production of our issue was held up because of a transport strike, and for the moment whatever the nature of the demands of the strikers, we certainly did not feel very sympathetic!) Then came the problems in our third year.

We can't help wondering at this point if this isn't quite typical of this kind of publishing. And is there a lesson in all this? That unless the skeleton structures for functioning are formalised in the first few years, the natural decline of enthusiasm in the later years will affect the activity drastically. We did try to do this with the ***SHR***. For instance, it was decided that the topic for each of the four issues would be decided well in advance. The editorial perspective, whether written by one of the collective or a 'guest', had to be circulated nine months in advance of the issue date. This would give enough time to organise a good collection of articles on a particular theme. This is how we have been functioning more or less, until recently and we hope to revive it very soon.

There were of course, many critical comments, perhaps the most important one, after the first issue, that ***SHR*** read too much like a 'high brow' journal. That is, the articles assumed a degree of familiarity with marxist analysis which may not exist among most readers. This led to the use of marxist terminology without explanation which sounded like jargon. This was a serious problem — either we could decide that those who did not have a grounding in marxist analysis were not our target readership and so we could not cater to their needs, or, we could attempt to 'dejargonify' the articles and in fact introduce the marxist approach to social analysis through the discussions on health issues. Almost unanimously we opted for the latter. We have attempted various ways of getting over this problem by trying to use a minimum of marxist terminology without damaging the analysis, and by presenting a mix of articles, some of which were more rigorously marxist than others. (Sometimes of course, we wonder if we have fallen between two stools because we receive our share of criticism on this count from both groups.)

Together with other problems, we discovered that for some reason we could not register the journal under its name. Of all the near -***SHR*** names we proposed, we were allowed to use the ***Radical Journal of Health.*** In January 1986, at a meeting of the collective, it was decided to set up a trust, which happily we could name the **Socialist Health Review Trust** to undertake the publication of ***RJH*** as one of its activities. We also decided to collect a corpus fund, introduce a life subscription and raise our subscription rate marginally. So far we had been subsidising the journal through donations collected in the first year or so but we could no longer do so. Moreover, this was also the time when **Omega** ran into a variety of problems and could no longer print ***RJH***, which meant that our cost of production would also go up. Fortunately we found friends again, in the shape of **Bharat Printers,** Bombay and the ***Economic and Political Weekly*** who undertook to print the periodical and typeset the matter and produce layouts respectively painstakingly, at reasonable cost, bearing with all our now haphazard time schedules. With this issue the journal is now back with **Omega** and may this be the last word on the subject!

The journal has touched upon a variety of issues some of these have become the focus of debate. But others which had been consciously raised with a view to generate discussion, such as the issue of the socio-economic roots of the prevailing practice of witch hunting in tribal region of Maharashtra, failed to elicit much response. We have come to realise that the 'objective conditions' have to be right even for initiating debates — they need to be live and day-to-day concerns. While theoretical issues do get a response the debate does not continue for very long. This may also be due to the fact that academic interest in health issues may be of recent origin in India.

To any retrospective reader it may appear that the ***RJH*** has glossed over three health issues which have been very much the focus of public attention in the years of our existence : pharmaceuticals, the Bhopal disaster and the campaign against amniocentesis and sex determination techniques. Although we did carry a couple of articles on Bhopal, we have not had a sustained focus on it. Similarly, while the ***RJH*** has published reports and discussion pieces on pharmaceuticals, it is only in our last volume that we have carried substantive articles on the drug policy or for that matter an entire issue on pharmaceuticals. We have done a little better on the amniocentesis campaign our very second issue carried an article on the topic and a recent number did as well; but nevertheless, we did not in a major way, contribute to the ongoing struggle to obtain a ban on the technique. Perhaps this needs an explanation of sorts.

Early on, it was felt that we did not need to publis'something' on every issue, unless we had something to say (

(Continued on page 15)

Health Care Beyond Apartheid

Economic Issues in Reorganisation of South Africa's Health Services

max price

The consequences of apartheid for health policy in South Africa are profound. Racial differences in health status and the allocation of health care reflect the inequalities of power and wealth produced by the political economy of apartheid. Furthermore, health policy is itself instrumental in furthering apartheid goals. It might be tempting then, to rely on the demise of apartheid and subsequent democratic redistribution of power and wealth to redress the fundamental inequalities in the provision of health care. Yet, as has been seen in Zimbabwe for example, radical political change is not sufficient in itself fully to transform the health services. Likewise in South Africa, it will require more than the mere removal of apartheid policies to attain health for all. This article analyses the economic organisation of health services in SA, so as to identify various structural obstacles to the provision of health care for all, which could well survive the demise of apartheid. The article analyses the proposed options for reorganising the economic structure of the health services to decide whether they make economic sense and to indicate the likely consequences of particular choices. It does not assess the political possibility of their implementation.

The article is abstracted from the author's Master's dissertation to the London School of Hygine and Tropical Medicine, published in full in ***Critical Health****, March 1987.*

IN 1944, in South Africa (SA) the Gluckman commission proposed the establishment of a comprehensive national health service. Few of the commission's recommendations were implemented. However, while not committed to the principle of a national health service, the Nationalist government steadily increased its control over the health services during the 1960s and 1970s. Since the late 1970s the trend has turned towards greater privatisation. This has recently been accelerated by the state's current fiscal crisis, combined with escalating health care costs. There are also strategic political and ideological reasons for the change in the state's policy towards increasing the number of people who use private sector providers. This trend has been supported by various private sector organisations, think-tanks, companies and professionals. On the other hand, there is also a growing concern about the inadequacy of the present health services amongst some professionals and political organisations, many of whom have called for the establishment of a national health service. Thus the debate on the choices to be made regarding how the health services should be financed, has again flourished.

Not surprisingly, it is often emotive, and positions are taken primarily because they are in line with the broader ideologies of the authors. But more importantly, when economic arguments are marshalled, they are frequently confused. Choices are crudely defined, since the options of 'privatisation' and 'nationalisation' are presented as if they were each a single uniform phenomenon. On closer examination however, it will be seen that the nature of each is more complex, and defined by a range of possible combinations rather than one essential feature. The choices in the economic reorganisation of the health services, therefore, comprise a series of options which should be examined discretely.

The effects of the system of apartheid on health and health care have been extensively researched and debated. These studies have focussed largely on those aspects of the health services that fall under direct government control — viz. the public health sector. There has been very little research or debate on the health service as a whole and in particular, its economic structure. Recently, however, this debate has flourished.

Although for most of the 1970s the government seemed to view the provision of health services primarily as an obligation of the state, and seemed to tolerate the private sector with some suspicion and a good measure of control, the recession and fiscal crises of the late 1970s and 1980s have resulted in a dramatic shift of attitude:

> Curtailed by the lack of resources, especially financial, ... a more active process of privatisation of health services is indicated. Dr. Francois Retief, Director General of the Department of Health and Welfare, 1985. [2]

> We will have to guard against being compelled to move away from the free market system. (The Minister of Health and Welfare in parliament, March 1984.) [3]

> Health authorities must not be seen as an infinite source of health facilities and medical care. More people should be able to make use of private health facilities as their economic circumstances improve. (Dr. M.H. Ross, Department of Health and Welfare, 1982.) [4]

The government appointed the Browne Commission of Enquiry into the Health Services in the Republic of South Africa in the early 1980s. Although it has recently submitted its report, this is not yet published at the time of writing. Since 1980, SYNCOM (PTY) Ltd, a private sector 'think-tank' organisation, has received several commissions to research the future of health care services in SA from the Pharmaceutical Society of SA (PSSA) and the Health Strategy Group (HSG). The HSG is composed of the Medical Association of SA, the Dental Association of

SA, the Chemical Manufacturers Association of SA PSSA, the Propriety Association of SA, the Representative Association of Private Hospitals, and the SA Nursing Association. In August 1985, the department of health convened a meeting at which representatives of the HSG, industry, academia and the public sector deliberated on the options for privatisation of health care. Out of this, four working groups were established which presented their consolidated report in February 1986.[5]

Between August 1985 and June 1986, the South African Medical Journal (SAMJ) carried 14 letters, an editorial and an opinion column on the subject of whether or not a National Health Service (NHS) would be appropriate for S A. So the future economic organisation of health services in South Africa is very much on the agenda.

The 'Ideological' Arguments

Much of the debate simply reflects participants' vested interests and ideological tendencies, with little attempt to explore the consequences of proposals honestly and rationally. For example, one opponent of NHS, in a letter to the South African Medical Journal (SAMJ), claimed, "They (the advocates of NHS) are simply advocating socialism", as if that were sufficient reason for his opposition. Far more disturbing though, is the following allegation by SYNCOM about a report it prepared for the HSG in 1982 (known as the SYNCOM III report): "The draft to the final report contained chapters on the future role of the Associated Health Service Professions, on the changing scientific paradigm, and on the need to shift the incentive in health care from the curative aspects to primary health care with emphasis on life styles and prevention... It was unfortunate that most of these chapters and observations had to be deleted, since they were perceived to clash with vested interests."[7] And, on the other side of the debate: "In our view, the right to health implies provision of health services which are free, ..."[8] There may be good reasons why some or all people should not have to pay for health care at the point of service, but this has to be argued and the consequences examined, and certainly does not derive automatically from the premise that health is a right.

The examples of these arguments which follow are given in order to illustrate my contention that they are confused because of the analytic approach they adopt. The substance of the arguments will only be assessed later, since the point here is only to justify the presentation of an alternative analytic framework.

Although presented with many minor variations, most of the arguments for privatisation are covered in the report of the four working groups on privatisation and deregulation, and may be summarised as follows:

1. As the demand for health care, and health care costs escalate, the government and taxpayer will not be able to afford the health care bill. Privatisation reduces the costs to the state of health care because:

(a) Privatisation shifts this burden from the public sector to private individuals. The implication is that because private health care is not provided free, patients have to pay for it and therefore they carry the costs, not the government.

(b) If people have to pay for health care, the tendency to overuse health services can be reduced considerably.

(c) Since all parties are agreed that a minimum level of health care must be provided for the indigent, the aged, the chronically ill etc, where necessary the government should subsidise the individual, not the institution. This is claimed to be cheaper for the government because private providers in a competitive market are more efficient than bureaucratically controlled, non-competitive public providers.

2. Privatisation permits a range of levels of health care to be offered by providers. This not only increases consumers' choice of provider, it also permits discrimination, or rationing of health care along non-racial lines, thus depoliticising the issue.

3. People attach more value to services for which they have to pay.

Argument 1(a) is concerned with the possibility of raising funds by making private individuals pay to use health services, thus easing the burden on the state. Yet, hospitals do not have to be privately owned, nor do doctors have to be in private practice for this to occur, since such charges could quite conceivably be made for publicly owned services. Thus this argument relates to methods of paying for health services (public versus private sources of funds), not the pattern of ownership of services (the provision of services by private, independent health workers and facilities).

Arguments 1(b) and 3 are concerned with reducing the demand on the health services, using fees as a disincentive to patients so that they do not use the services 'unnecessarily'. These incentive effects on demand for health care depend on the use of user charges, third party systems of payment and other factors all related to the methods of financing health care, not the pattern of ownership of health services. For example, if patients have 100 per cent health insurance, then there is much evidence that their demand for health care increases, regardless of whether they are being treated in the private or public health sectors.

Just as public facilities can charge for their services, public funding can be used to pay private providers, as is suggested in argument 1(c). This argument is obviously concerned with a different sense of privatisation, viz, multiple private owners of health services rather than private sources of funds.

Argument 2 is about rationing scarce resources and the consequences for equity. Privatisation here refers to a particular pattern of ownership, viz., multiple providers; a particular method of financing, viz., private payment via

'user charges' or voluntary health insurance; and a particular form of remuneration of providers, viz., on a fee-for-service basis. Only with such a combination can the quantity and quality of service be varied according to how much a patient is willing to pay.

Much of the confusion in the debate on privatisation results from the failure to separate out three distinct aspects of privatisation: (1) private sources of funds; (2) payment of providers on a fee-for-service basis; and (3) private ownership of services. More generally, it is necessary analytically to recognise three distinct components in the economic organisation of any particular health service. These components are: (1) Methods of financing health services, i.e. how funds are raised to pay for health services; (2) Methods of remuneration of providers; and (3) Patterns of ownership of the health services.

When we turn to the international literature to throw some light on the debate about the economic organisation of health services, we find similar confusions arising from the same analytic failure to disaggregate the components of the economic organisation of health care as was found in the South African debate. Two examples are examined here to illustrate this.

Debate About Private Practice

In an article entitled 'Private Medical Practice: Obstacle to Health For All' Roemer identifies the following problems associated with private practice: (1) perverse incentives leading to unnecessary investigation and treatment, and escalating health service costs; (2) inequity resulting from the inability of lower income patients to afford fees to cover treatment costs; and (3) maldistribution of medical manpower caused by doctors' attempting to maximise their income by moving to areas where demand is high, i.e. where there are large numbers of people who can afford private medical fees.[9]

But are these problems endemic to private practice or do they apply to a particular form of private practice? If the latter, how can we identify what it is precisely about that form so that it can be selectively altered? I will take the problems Roemer identifies in turn.

1. The problem of perverse incentives and escalating costs arises because, in the health care market, the supplier is an important determinant of demand and therefore perfect competition fails. This problem may be aggravated when the provider is reimbursed on a fee-for-service basis, such that the more expensive the investigations and treatment, the more the provider benefits. As I will show later if private practitioners were paid on a capitation basis, whether by the patient directly or by the government or other third party, the perverse incentives would disappear although ownership of the services would remain private. In other words, the problem needs to be analysed by focussing on the method of remuneration of the provider since this is not inherent in the pattern of ownership (i.e. private practice).

2. Unequal access to health care due to inability to afford fees is mainly a problem for poor people who do not participate in any risk sharing scheme. In Western Europe, where 90 per cent to 100 per cent of the population are covered by social security, the inability of the poor to afford the fees of private health care is largely solved. (This is not to say, of course, that non-fee costs, utilisation, quality of care or distribution of burden of financing is equitable.) Again, the point here is that the criterion in this discussion, equity, relates specifically to the method of financing, rather than to the institution of 'private practice'.

3. The maldistribution of doctors in favour of the urban rich again depends primarily on the method of financing. For example, if private, self-employed doctors were paid an adequate fee-for-service by the government on behalf of the poor (i.e. by subsidising the individual), they might move to areas where they could maximise the number of patients per doctor. This could produce a reasonable distribution of doctors. The maldistribution of private practitioners is more accurately attributable to whether private or public sources of finance are used, than to how they are reimbursed, or the pattern of ownership.

Thus we can only make sense of Roemer's criticisms, given a strict definition of 'private practice' as entailing self-employed providers, dependent on fee-for-service for their income, where the fees are paid by patients with no risk sharing arrangements or third party payment systems. Roemer probably intended this definition. However, as the responses to his article exemplify[9], others may not accept such a strict definition and the different meanings of 'private practice' (e.g. direct payment by private individuals, competing privately owned practitioners, etc.) are one source of confusion in the debate. Yet this could be readily overcome by making one's definition explicit.

The more serious criticism though, is that the discussion fails to recognise that the economic organisation of health care (in this case, private practice) has three analytically distinct components viz. financing, remuneration and patterns of ownership. The failure to disaggregate the institution into its component parts masks the fact that judgements made about the institution as a whole, are in fact the result of judgements about one or other component of the institution. It is this failure to apply evaluative criteria to the separate components individually that results in much of the confusion that surrounds debates about the pros and cons of different ways of organising health services.

One way in which authors frequently deal with the conceptual difficulties that arise, is by apparently restricting their discussion to the first component — the financing of health services. However, their failure to identify the other two components often results in the de facto inclusion of the latter under a discussion of 'financing',

and the same confusion recurs. Zschock, for example, categorised the possible ways of financing health services as follows:

(a) Public and quasi-public sources — general tax revenues; deficit financing (including foreign loans); sales tax revenues; social insurance; lotteries and betting.

(b) Private sources direct financing of health care by employers; private health insurance; charitable contributions (including foreign grants in aid); direct household expenditures for health; communal self-help.[10]

Although these categories appear to relate only to financing, the discussion that follows this classification suggests otherwise. For example, with respect to general tax revenues, Zschock argues that "to increase significantly the proportion of general tax revenues allocated to health care ... would imply a movement towards increased socialisation of the health sector by providing free or low cost health care services for most or all members of society."[11] Yet there is no necesary connection between the extent of government funding (a financing issue) and the socialisation of the health sector (which concerns patterns of ownership, if socialisation means the extent to which health workers are employed by the state). Public funding very frequently goes to the private sector directly as fees (e.g. Medicare in the US), or as subsidies to social security, or as capitation fees to GPs. The methods of remuneration, the patterns of ownership of the health services and the various combinations of financing methods are all separate questions.

Social insurance or social security is another example of confused debate. Some authors do attempt to distinguish different forms which social security systems might take, e.g. direct (employing health workers and owning facilities) and indirect (paying independent private practitioners and facilities), multiple or single providers. [12,13,14] Abel-Smith makes the point that the many problems attributed to health insurance are not intrinsic to health insurance as a system of financing services, but to other associated features — e.g. in Europe, the fee-for-service remuneration system, and in Latin America, the separation from the ministry of health and the competition among the many social security schemes for scarce personnel.[15] Thus analysing social security as a method or source of financing is confusing unless the point is to show that very little can be said that is true of social security systems in general. Once again, the analysis would be facilitated by disaggregating the three components.

An Alternative Framework

The left hand column of table 1 sets out an alternative framework for the analysis of the economic organisation of health services. This has firstly been divided into its three component parts. Secondly, within each component a number of possible methods are identified. The methods within any component are not mutually exclusive, and frequently occur together in the same organisational form. For example, private health insurance may require co-payment and thus the method of financing includes user charges. For the sake of continuity with the conventional taxonomies, the table attempts to indicate the links between the categories used in this analysis and conventional categories (in the right hand column). Also in the right hand column are the institutional forms which usually manifest the particular method of financing, or remumeration, or pattern of ownership.

Increasing Finances For Health Care

In the debate on health care financing in SA, privatisation has most frequently been supported on the basis of the claim that it will result in more funds being made available for health care. The argument, typical of that common in the international literature, usually runs something like this: The level of resources that a government can raise and devote to health services will always be less than is required to meet the health needs of the whole population. (Indeed, even if the whole GNP were allocated to health, this would not meet the total needs). If, however, there are individuals or groups of individuals who are willing to pay more for better health services than can be provided through the public health sector, this should be encouraged because it can release the public funds spent on these individuals. Thus total resources allocated to health services can be increased, and public health expenditure can be concentrated on the poorer members of society.

This type of argument in favour of privatisation depends on a number of assumptions which are only valid under certain conditions. The following discussion identifies the conditions under which each assumption would hold, and shows that these do not obtain in SA at present. It suggests how these conditions would have to change in order for privatisation to make economic sense as a means of increasing the total financial resources devoted to health care.

First Assumption: Public and Private Methods of Financing are Independent

The first assumption is that the increased expenditure by other sectors (private individuals, medical schemes, employer- provided services) releases public expenditure that would have been spent on the beneficiaries of those sectors. Thus, for example,

> (The private sector) is self-perpetuating and independent of government finance. ... (it) is therefore not to be considered a drain on public funds. (Submission from Hoffman Hospital Group to the Browne Commission Enquiry.
>
> (P)rivatisation of health services ... would lead to considerable savings in terms of demands made on

Table 1 : Three Components in Economic Organisation of Health Services and Available Options

Components of health service organisation and options within each component	Conventional categories and Institutional form usually taken
A. Methods of Financing:	
Public Methods of Financing:	
Taxes - General	Income, company, property taxes
- Sales tax, import/export duties	Sales tax, tariffs and duties
- Charging out costs to those who generate them	Motor vehicle licences and compulsory third party insurance
	Taxes on tobacco, alcohol
	Workmen's compensation contributions from employers
Deficit financing	Deficit financing and foreign loans
Foreign Aid grants (bilateral/multilateral)	Foreign Aid grants (bilateral/multilateral)
Lotteries and betting	Lotteries and betting
Public, Quasi-public or Private Financing Methods:	
Employer & employee contributions (other than general taxes)	Direct provision of, or payment for health services by employer
	Payroll taxes
	-National health insurance
	-Social security, compulsory health insurance
	-Private health insurance
	Charges related to generation of costs
	eg. workmen's compensation
Private Methods of Financing:	
Charitable contributions	Frequently from wealthy families, firms, religious groups
Private health insurance	Private health insurance
	Direct household expenditure
User charges	Direct household expenditures— for treatment and drugs etc.
	Co-payments — proportion of total costs, deductibles,
	excess above ceilings, for excluded benefits
B. Reinmbursement of Providers	
Fee-for-service	Private practice
	"Indirect " social security (eg as found commonly in Western Europe)
	Private health insurance
	Direct household expenditures
Capitation /pre-payment fees	Health maintenance organisations
	National Health Service "contract
	arrangements" with GPs (eg Britain)
	Community based/cooperative financing
	(eg Brigade level health care, China)
Salaried/budget allocation	Government provided health services
	"Direct" social security systems
	(eg as found commonly in Latin America)
	Employer provided health services
Others eg. bonus systems, merit award	
C. Patterns of Ownership	
Predominantly public owned health service (other sectors very small)	eg National Health Service (UK), small private sector, small or no quasi-public sector.
Multiple sectors, Many private providers as well as public and quasi-public sectors	Public sector as well as one or more social security schemes and/or employer providers and/or self employed practitioners
Community owned health services	Community financing [16]

the central coffers (Report on Privatisation and Deregulation of Health Care in S. A., 1986 — hereafter referred to as the Report on Privatisation.)

However, the private sector is not, at present, "self - perpetuating and independent of government finance." For, the public sector subsidises the private sector in numerous ways.

Tax concessions: Under corporate tax law, the contributions paid by employers are tax deductible, and the contributions paid by individuals are abatements under individual tax provisions. In 1982, medical schemes' income from contributions was approximately 54 per cent of total private health expenditure (26 per cent of total health expenditure) of which at least one-third is subsidised by the state, i.e. the real cost is 50 per cent more than what employers and employees pay. [17] This loss of tax r ue (at least R337 million in 1982), was equivalent to 1 er cent of total public sector health expenditure, and more than twice the total amount spent on preventive ser ices.

Subsidies For Medical Education: The major share of the costs of medical education is borne by the public sector. This is a form of 'human capital' investment by the state. When the doctor is employed in the public sector, it may be assumed that his/her salary undervalues his/her output by an amount equivalent to the return to the state on its investment. When a doctor is either self-employed or employed by another sector, the additional value accrues to him/her and to his/her patients. This value is an effective subsidy to those sectors from the public sector.

Estimates of the cost to the state of the undergraduate training of a doctor vary from R36, 000 [18] to R100, 000. [19] 937 doctors qualified in 1985, half of whom will eventually work in private practice. This is equivalent to a state subsidy of R47 million (2.4 per cent of public expenditure) to the private sector, excluding the costs of post-graduates' training.

Subsidised Use of Public Facilities: Publicly financed facilities are usually available to private sector patients (especially for sophisticated tertiary care), but also frequently for routine care under private doctors. Most patients requiring emergency admission are admitted to public hospitals regardless of their income and whether or not they are covered by medical aid. These patients are charged at less than the running costs of maintaining the beds (i.e. ward costs), let alone the full costs of investigation and treatment. In 1984/5, in the Cape, the average daily cost for an in-patient at a teaching hospital was R130.14, for which the maximum fee of R45.00 was charged. (In provincial non-teaching hospitals the costs and maximum fees were R55.45 and R36.00 respectively.) [20] Thus the government is subsidising the non-public sectors.

Other Forms of State Subsidisation: The government, as one of the largest employers' pays employer's contributions so that its own employees will have medical aid coverage, and be able to use the private sector providers. Many other forms of subsidy would be too complicated to measure — e.g. the costs of training nurses and other health workers, the cost of research, drug testing and control, and other parts of the health service infrastructure which benefit private sector, and public sector patients alike.

Thus it is not at all clear that the private sector does indeed release public resources for use on services for those who cannot afford private health care.

It is likely that the individual who uses the private sector providers costs the government more in subsidies than is spent by the government on individuals who depend on the publicly funded services. [21] The subsidy to the private sector therefore, distorts public sector resource allocation in favour of those who are already the most privileged. However, there is no theoretical reason why subsidisation of the private sector cannot be reduced.

The state could quite conceivably withdraw tax concesions; it could charge private patients the full cost for the use of public facilities; doctors who leave the public sector could be obliged to pay an additional tax on their earnings, etc. Withdrawing all subsidies may raise the costs of private health care so high that demand is transferred to the public sector. The costs of meeting this demand may therefore reduce the net savings to the state.

Nevertheless, the assumption that other sectors release public resources which can be directed to higher priority services, often ignores the many ways in which the public sector subsidises other sectors, and the distortive effects this has on public sector resource allocation.

Second Assumption: Only Private Sector Services Can Raise Funds from Private Sources.

The second assumption in the argument that privatisation increases total funding for health services, is that publicly owned services are financed from public sources of funds, and privately owned services, from private sources which would not otherwise come into the health sector. As the Report on Privatisation expressed it, "Privatisation seems to imply a shift towards health as a personal responsibility and feel and unlimited access to health care as a privilege."

Yet this assumption fails to separate, and distinguish between, private ownership of services and private sources of finance. Privatisation of ownership is only one way of getting private individuals to finance their own health care. For, user charges can be a method of financing public sector providers just as it is for the fee-for-service providers. Publicly owned services need not be financed entirely from taxation, but can draw on other methods of financing as well, e.g. social security, health insurance and user charges.[22]

Third Assumption: Political Pressure for Public Funding Will Not Decrease.

The third assumption is that the existence of a private sector would not inhibit or depress the amount raised by public methods of financing and allocated to health care. Yet, in the presence of other methods of financing from private sources, and alternative private providers, it is likely that the people with political influence (usually the relatively wealthy, urban dwellers with regular employment), will not be dependent on the publicly financed services. There is a strong chance, therefore, that they would not lobby either for increasing the tax effort or for allocating a greater proportion of public expenditure to the health services.

Thus privatisation has been seen as a way of offering urban, middle-class blacks access to racially integrated medical care of better quality than is available in the public sector. This has been motivated precisely by the belief that it defuses the political pressure from this articulate group to improve public health services for blacks in general, which would be extremely expensive. And as the Report on Privatisation concludes, "There is likely to be an overall saving to the taxpayer." Yet this may be one of the greatest dangers of privatisation, and may result in little increase in the total resources allocated to health care, and a decline in public sources of finance for the health services.

It is possible, though, that if a future democratic government were committed to providing the best public service the country could afford, that the existence of the private sector would not reduce the political pressure for raising public finances, and therefore total finances could be increased by permitting other sectors to operate and raise funds. Roemer's research in Latin America, for example, suggested that there was no decrease in the allocation of public funds to health services with the growth of the social security systems there. The overall level of resources available was indeed increased, and he argues that money that would otherwise have been spent on the costly and inefficient private health sector (if it had been spent on health at all) was channelled into the more efficient social security sector. At the same time, governments were able to devote larger proportions of their expenditure to deprived rural areas.[23]

The economic organisation of the health services should ensure that, for any given total expenditure, the health outcome is maximised. The concept of 'efficiency' encompasses both (1) financial efficiency and (2) economic efficiency.

Financial Efficiency

Financial efficiency is a measure of the proportion of total expenditure that is spent in the direct 'production' of health care. If system 'A' produces the same output of health care as system 'B' but at lower cost, then 'A' is more efficient, financially, than 'B'.

With respect to methods of financing, financial efficiency refers to the difference between the gross and net yields of a particular method of financing. This relates primarily to the cost of administering the collection and allocation of funds. Other measures sometimes considered are the difference between actual and hypothetical gross yields and reliability or stability of a source.

The protagonists of privatisation claim that public methods of financing are financially inefficient. For example, in its conclusion, the Report on Privatisation and Deregulation in SA claims that, with privatisation, "more funds would be available for the direct delivery function through a reduction in regulations, interventions and central decision-making".

Yet there seems to be little evidence to support this. The government spends 0.34 per cent of tax revenues on tax collection, and 0.9 per cent of public health expenditures administering financial allocations to the health services.[24] Most medical schemes, on the other hand, spend between 6 per cent and 10 per cent of their income from contributions on administration, i.e. calculating and collecting contributions and processing claims.[25] There are also numerous examples of overcharging by private hospitals, since it is difficult for medical schemes to check the bills and there is little incentive for patients to check them, even if they are informed enough to do so. This reduces the efficiency of this method of financing, since it results in more being spent with no increase in output.

This evidence is compatible with the findings of two recent international health care expenditure surveys. Commenting on them, Navarro concluded that western industrialised countries with the greatest government funding and administration of health services have the greatest population coverage and the lowest administrative costs.[26]

There are no estimates of the costs of collecting user charges either in the public or private sectors. However the relative costs will largely depend on whether the user charges are flat rates, or are related to the costs of providers (as with fee-for-service providers). This will therefore be covered in the next section (on the efficiency of different methods of remuneration).

(a) Private fee-for-service hospitals: Many of the arguments presented in the South African literature in favour of privatisation, are based on the belief that competitive providers motivated by profit and dependent on fee-for-service for their income, are financially more efficient than non-profit, government-owned services where facilities have fixed budgets. These arguments also reflect a faith in the power of the free market to prevent higher costs and excessive profits being passed on to the consumer in higher prices.

A criticism frequently made about the financial management of public sector hospitals is that "public hospitals in South Africa do not operate on a true costing system and

nobody actually knows what it costs ... to keep a patient." This criticism is valid. However, it does not follow from this that these hospitals are managed inefficiently, and the lack of cost data means that no accurate comparisons have been made. There is therefore no good evidence to suggest that private hospitals are more cost effective than public hospitals.

Indeed, one might expect the reverse. For, firstly, there can be little doubt that the flat rate fees charged by public sector facilities, even when applied on some sort of means tested basis, are cheaper to administer than the user charges in the fee-for-service sector. For, in the latter, the need to calculate charges for each item (drug, investigation, use of equipment etc.) for each patient individually, makes billing complicated and costly.[27]

Secondly, most of the hospitals which operate on a fee-for-service basis are profit making enterprises. As the director of one of the Rembrandt group of hospitals said, "We came onto the scene in 1983 purely for business reason — we didn't do it for charity. We see the medical services industry as an area of growth." [28] The profit obviously accounts for some of the difference between the gross expenditure on health in the private sector, and the net amount actually spent on activities which improve health.

At a fairly crude level of analysis, there is considerable evidence suggesting that fee-for-service hospitals are more expensive for less output. Comparisons are hazardous because one is not comparing like with like. For example, the costs per patient-day in public hospitals may include the costs of training personnel, of treatment, drugs, etc, but generally exclude capital expenditure, while for fee-for-service hospitals, ward costs exclude medicines and treatment, but include amortisation of capital expenditure. There is usually no training of medical staff in private hospitals. The quality of care and of the 'hotel' functions may differ. Furthermore, many of the most expensive treatments are available only or mainly in public hospitals (e.g. cardiac surgery, neonatal intensive care) because these are not covered by most medical schemes, or they are not profitable. The following comparisons must therefore be treated with due caution, though the order of difference seems so large that it is doubtful that the direction would be altered by the net effect of these biases.

In the Cape, the Groote Schuur teaching hospitals had an estimated daily average cost per unit of R108.37, and an average for all Cape provincial and aided hospitals of R63.43. In the Transvaal, in 1983/4, the median cost per patient day of 69 provincial and provincial-aided hospitals was R63.27. [29] Compared with this, fee-for-service hospitals are estimated to cost R100 per patient per day for ward costs alone (hotel and nursing services), before the costs of any doctors fees, theatre costs, investigations, drugs etc. are added. [30] On the other hand, in some private sector industrial hospitals, which are non-profit, with salaried health workers, and which do not have to compete with other providers (as employees are obliged to use the services provided), the average cost per patient day in 1984 was R30.61, inclusive of all drugs and treatment. [31]

Table 2 : Comparative Costs of Specific Curative Health Services in Public and Private Sectors 1984.

	Cost to Cape Provincial Administration	Cost to private patient at medical aid rates
GP Visit	R 10.00(a)	R 39.50(b)
Obstetric Confinement	R 567.00(c)	R 850.00(d)
Herniorraphy (5 day stay)	R420.00(e)	R 990.00(d)
Pneumonia (5 day stay)	R 420.00(e)	R 700.00(d)

Notes:

a. Cost per patient seen at Cape Peninsula Day Hospital includes investigation, minor procedures, day theatre cases, district nursing and medicines.

b. GP visit and average medical aid pharmaceutical cost of R30 per patient.

c Cost per confinement at Peninsula Maternity Hospital, including complicated obstertrical cases and neonatal ICU facilities.

d. Uncomplicated normal medical aid patient.

e. Cost to the Cape Provincial Administration of a 5 day stay in Victoria hospital (a non-teaching hospital).

(Source: Frankish J, Thomson E, Budlender D, Zwarenstein M, Dorrington R, Bradshaw D. *Privatisation of Health Services — Who Benefits?* Unpublished. 1986.)

A more comparable and accurate analysis of costs in the public and fee-for-service sectors has been made by Frankish et al (Table 2).

In the light of the above, it is interesting to note the findings of a recent study in the United States, which compared the differences in the economic performance of matched pairs of 'for-profit' and 'not-for-profit' hospitals. While there were no significant differences in patient-care costs, the total charges and net revenues per case were both significantly higher in the 'for-profit' hospitals due to higher administrative overhead costs. The author concluded that 'for-profit' hospitals generated higher profits through more aggressive pricing practices rather than higher operating efficiencies. [32]

The imperfections of the market, in the case of health care, have been frequently discussed in the literature [33] and cannot be reviewed here. It may be concluded, however, that the evidence available suggests that the profit motive, and the competition of multiple fee-for-service private hospitals are no guarantee of greater financial efficiency. Indeed, such an economic structure is probably less efficient.

(b) *Effects of Methods of Remuneration on Efficient Use of Personnel Resources:* Doctors in SA have jealously guarded their monopoly over the right to diagnose and treat, and 'primary health care nurses' have only been allowed to perform a limited range of tasks in certain prescribed circumstances. There is adequate evidence from all over the world that, in both developing and developed countries, other health workers can perform many of these functions at lower training and salary costs. Yet South Africa's present inefficient system will not change as long as doctors earn more for seeing patients themselves, as occurs in a fee-for-service system. If, for example, doctors were paid a capitation fee, then it would be in their economic interests to employ cheaper health workers to perform the tasks for which they are competent, so that their own more expensive skills could be used more efficiently, while covering a much larger population.

Effect on Financial Efficiency of a Multi-sector Pattern of Ownership.

(a) *Wage inflation:* The competition between sectors for fixed resources forces up wages in both the public and private sectors. Comparing salaries of professionals in the public sector in 1984, the median salary (before tax) of male doctors was 26 per cent higher than engineers, 39 per cent higher than lawyers, but only 4.5 per cent less than doctors in the private sector. [34] As one private hospital managing director said, "We just take a lead from the government hospitals. When they increase their rates we simply add a bit more on to get the staff." [35] This is unrelated to productivity, and hence is purely inflationary and is financially inefficient.

(b) *Duplication and Economies of Scale:* In 1974, the de Villiers Commission found that there was a lack of planning, especially between provincial and private hospitals — an excess of beds had been provided in certain urban areas, resulting in too low a rate of occupancy in provincial hospitals as well as private hospitals. [36] But this is not merely the result of poor coordination. It is the inevitable consequence of access to different providers being restricted to different groups in the population (the rich and the poor) when these groups overlap geographically. Thus there will be many areas where both public and private facilities overlap merely because they are not open to all the people who live near them. If this results in the failure to achieve economies of scale, then average costs are high, and the arrangement is financially inefficient.

Economic Efficiency

Economic efficiency, as opposed to financial efficiency, is concerned with the allocation of resources in socially optimal ways. The reality of finite resources means that more of health care entails less of something else, and within the health sector, more of one type of health care means less of another. Optimal economic efficiency occurs when the marginal rand produces equal benefit, no matter where in the economy it is spent. In a free market, the price mechanism may equilibrate supply and demand in a way that reflects individuals' relative evaluation of alternative combinations of resource allocation. However, in the health care market, the price mechanism fails to achieve economic efficiency for several reasons: the presence of monopolistic providers (e.g. doctors); consumers are not well-informed and have difficulty choosing between alternatives; providers influence consumption more than consumers; there are significant externalities such that the social benefits exceed the sum of the individual benefits (and therefore willingness to pay); and unequal income distribution results in monetary prices reflecting different marginal utilities at different income levels. [37]

Consequently, other mechanisms are needed (some of which may also use prices as signals to providers and consumers) to promote efficient resource allocation. Broadly speaking, these mechanisms act either on the providers to influence the supply of health services, or on the consumers, to influence the demand for health care.

The efficient allocation of resources therefore, depends inter alia on: (1) The ability to control allocation on the supply side — determined largely by the pattern of ownership of the services. (2) The ability to control demand for health services, i.e. to limit demand for each kind of service to levels that are socially optimal — dependent on the methods of financing and remuneration.

There can be little doubt about the economic inefficiency of resource allocation in a country where heart transplants are being performed while the vast majority of the population suffers from vaccine preventable diseases. This failure to allocate resources to where they will achieve the greatest health improvements for the maximum number of people, occurs because the economic agent, the decision maker, is split into parts with independent allocation systems. The result is that the benefits and opportunity costs of a given allocation are borne by different parts of the system. Put another way, even when the marginal rand spent by different parts of the system produces highly unequal benefits, no transfer of resources occurs between the separate parts of the system, in favour of those sectors where they could produce a greater marginal benefit.

The present system prevents the optimal allocation of resources in two ways. The first is the racial and geographic fragmentation of the public health service and the division of control over total health care spending between many sectors (government, medical schemes, employers, private individuals). The other is, of course, the control of public health services, by an undemocratic minority government. For such a government, the present policy may be 'rational' in the sense that it serves the interests of that government. Thus even if there was a single authority controlling all health resource allocation,

in the absence of a democratic government, health policy would be unlikely to benefit the maximum number of people.

Yet, assuming that in the future there is adequate democratic control over public health expenditure, if private expenditure is significant, it will continue to produce inefficiencies since private individuals do not suffer the opportunity costs of withdrawing trained personnel and technology from the public sector. The effects on the public sector could be minimised, though, by removing any subsidy to the private sector. Then, if private individuals were willing to carry the full cost of, say, haemodialysis, public sector resources would not be diverted and the optimal allocation of public expenditure need not be reduced (although the economic efficiency of *total* expenditure would still be suboptimal).

The determinants of demand for health services are multiple and complex. Financial incentives are clearly only one group of determinants. Furthermore, it is difficult to say what the appropriate level of provision for any particular service is. However, in terms of economic efficiency, the quantity provided is optimal when it costs what society is willing to spend on it, i.e. the value society places on it relative to other possible uses of those resources.

When the economic organisation of the health services does not have adequate mechanisms for limiting demand to the level for which resources have been allocated, demand will exceed its optimal level, drawing in more resources and resulting in economically inefficient resource allocation. This also means that cost escalation cannot be controlled.

(a) Economic Efficiency and Methods of Financing: Third party methods of payment frequently result in economic inefficiencies and cost escalation. If individuals had to pay the true marginal costs of medical care, they would allocate their resources according to how they valued each, which would ideally reflect the relative cost-benefit of each. A collection of individuals, in the form say, of the state (ministry of health), or an insurance group, should allocate their collective resources the same way. However, having paid their insurance contributions, individuals who no longer have to sacrifice more in the short term for demanding more expensive curative care, will demand more than the value of that care to them (the problem of 'moral hazard'). Assuming, for this example, that the provider faced no financial incentives either to provide or withold treatment,(s)he will attempt to do what is best for the patient personally. To serve the patient's interests well,(s)he will administer additional care as long as there is some net benefit to the patient.

Yet this may be excessive from society's point of view since the same resources could have achieved greater overall welfare had they been used for some other purpose. In the long term, costs will escalate, with aggravated distortions and growing economic inefficiency.

(b) Economic Efficiency and Methods of Remuneration —Problem of Perverse Incentives: In the example above, it was assumed that the provider was interested only in what was best for the patient. However, given firstly, that the provider is the main determinant of demand for investigation and treatment, and for secondary and tertiary care, and secondly, that the patient can afford almost any fees either personally or through risk sharing arrangements, the fee-for-service system offers financial incentives to the provider to perform more investigations and treatment than are necessary or justifiable. This is the problem of "perverse incentives."[38] In Brazil, for example, doctors and hospitals receive the highest fees from private patients, slightly lower fees for patients on social security, and the lowest for indigent patients (paid by the government). The rates of caesarian section in primiparous women in 1981 were 75 per cent in private patients, 40 per cent in insured patients and less than 25 per cent in indigent patients.[39]

Usually the interests of the income maximising practitioner will not be in conflict with those of the patient — the marginal investigation may indeed increase the certainty of diagnosis. Furthermore, other non-financial incentives such as status, career advancement, medical ethical principles and regard by peers may protect the patient's interests. However, all these incentives work in the same direction as the financial incentives, encouraging the doctor to 'do more' rather than less, with little regard to the economic costs to society. Thus the system of fee-for-service remuneration aggravates the problem of efficient resource allocation and results in the dramatic cost escalation.

By contrast, the incentive effects of remuneration by salaries and capitation fees do not have the 'perverse' effects that occur with fee-for-service, with its consequences for cost escalation and economic efficiency. In prepaid (capitation) group practices the providers undertake to cover part or all the costs of treatment that a patient may require during the next year (or other period of time). This creates financial incentives not only to keep patients healthy in the first place, but also to limit unnecessary or excessively expensive tests, drugs, referrals etc. Saward and Fleming, for example, have shown that prepaid group practices can be more cost-effective than fee-for-service systems, largely because of lower hospitalisation rates.[40]

In S.A, as in most other countries, per capita expenditure on health care has escalated in real terms. One source (in the Report on Privatisation) estimates that real per capita expenditure by the state increased by 13.5 percent from 1975/6 to 1984/5 (i.e. 1.4 per cent annually, compounded). On the other hand, average Medical Aid premiums (which approximate per capita expenditure by medical schemes) have increased 500 per cent from 1975 to 1986 compared with an inflation rate of 387 per cent over the same period

(a real annual increase of 2.3 per cent compounded), i.e. more than 1.6 times the per capita rate of increase of public expenditure. [41]

Another source puts the increase in total (public and private) real expenditure on health (not per capita) at 26.5 per cent from 1978 to 1982 (or about 6 per cent annually compounded). Over the same period medical schemes' total real expenditure increased by 31.3 per cent (or 7 per cent annually compounded). Some of the factors that have contributed to cost escalation over the decade have been demographic changes e.g. aging white population, urbanisation of blacks, increasing income and sophistication of patients, increased coverage by medical aids (membership has been increasing by about 20 per cent in five years), increased provision of services, increasing costs of high technology equipment combined with a falling exchange rate, recession and poverty. All these trends are likely to continue. The economic organisation of health services ought to be able to contain costs at appropriate levels. Yet, there is evidence that in both the private sector and public sectors, the structure aggravates cost escalation and does not provide mechanisms for its control.

An increase in expenditure on health care is not in itself a bad thing, especially since the proportion of the GNP devoted to health care is relatively low (4.9 per cent), compared with most industrialised countries. Yet the following quotes indicate that, in the private sector at least, the cost escalation is due to the inability to limit demand to socially optimal levels i.e. to growing economic inefficiency.

In 1985, John Erntzen, chairman of the Representative Association of Medical Aid Schemes of S.A. (RAMS), said that as a result of increased claims: medical aid schemes throughout the country are on the brink of collapse ... (T)here is evidence that doctors are offering more services, often unnecessary, to make a living. ... RAMS has also found that doctors charge more and offer less services at any given consultation. ... (T)he man-in-the-street also insisted on a lot of treatment because he felt he was entitled to it because of his medical aid membership. [42]

He also claimed that, while medical tariffs in 1984 were an average of 4.4 per cent higher than in 1983: (y)et we have found that our claims costs for 1984 rose much higher than this: up 19 per cent on 1983 for general practitioners and 25 per cent for specialists. This can only suggest that more services are being performed (per beneficiary). Those doctors who rely on medical schemes for their income see our members on average 25 per cent more than those doctors contracted out." (Tony Leveton, executive chairman of Affiliated Medical Administrators [43].

And, in the Report to the Department of Health on Privatisation and Deregulation in SA, it is claimed that the "disproportionate increase (in private medical expenditure) can most likely be ascribed to an overuse of health care facilities in the private sector due to the present structure of Medical Aid Schemes".

These are exactly the obstacles to economic efficiency that are created by the inability to contain excess demand due to the moral hazard problem of third party methods of payment, and the perverse incentives effect when suppliers who influence demand are reimbursed on a fee-for-service basis.

This report to the department of health recognised that "the present triangular arrangement (consumer-provider-funder) is highly inflationary" and that, in such a system, "with state subsidy to individuals, the results could be disastrous." Yet its answer was that, " to overcome this, prepaid cover for health care should be market-oriented," so that people could attain the kind ofcover they require. But this is a *non sequitur*. For, no amount of market orientation will alter the inflationary triangular arrangement. The report goes on to say that the members of the four working groups that produced the report could reach no agreement because of strong vested intreests", and that this "requires much further detailed study once the principle has been accepted." (One might have thought that such a study should precede acceptance!)

Thus, on the one hand, they are unable to accept the logic of their own arguments because the conclusions would conflict with"strong vested interests". On the other hand, since they refuse to question their assumptions about the efficiency of private sector health care, any observed inefficiencies in the present system are regarded as the indications that further privatisation is required. As we have seen, the real problems are the fee-for-service method of remuneration and the dependency on health insurance as a method of finance.

These are not the only obstacles to limiting demand to socially optimal levels. Any mechanism that lowers fees below their marginal cost may result in `excess' demand. And, as was suggested above, even when there are no perverse incentives (such as with salaried doctors), supplier induced demand, and hence costs, are difficult to control. These latter problems occur in the present structure of the public sector, since the doctor does not have to carry the costs of the quantity of care (s)he provides, and the opportunity costs of such care frequently exceed the marginal benefits. However, in the public sector, where total expenditure is constrained by a predetermined budget, suitable management mechanisms could be developed to control the supply of services and thus control costs.

Any changes in the economic organisation of health services designed to meet the objective of greater economic efficiency, must clearly move *away* from these methods of financing and remuneration by introducing selective user charges; by reinbursing providers on a capitation fee or salary basis; and by making providers bear some of the cost of the demand they induce. In the public sector, manage-

ment systems will be required to ensure that resources are directed towards those communities and types of health care that produce the highest marginal benefit.

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17. For every R1 contributed, 50c is paid by employers, most of whom are companies. The company tax rate is 50 per cent, thus the company effectively pays only 25c and the government pays the other 25c (through loss of tax revenue). The employee pays the other 50c. The lowest rate of individual taxation is 16 per cent (the highest rate on the marginal Rand is 50 per cent). Even if all employees are assumed to be on the lowest rate, the effective government subsidy is: 16percent X 50c = 8c. Therefore the total minimum subsidy is: 25 + 8 = 33c in the rand.
18. Calculated from figures given in reply to a question in the House of Assembly. *Hansard* February 27, 1986, column 256. "The estimates are based on the subsidy formula used for calculating the 1986subsidies" i.e. they are not based on calculations of cost.
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21. The total value of these government subsidies, divided by the number of people who benefit from them (approximately 20 per cent of the population who use the private sector providers), is likely to be more than per capita public sector health expenditure. The tax concessions alone, which equal at least 17 per cent of the public health budget, benefit only about 16 per cent of the population (the proportion covered by medical schemes). If the whole public sector health budget were distributed evenly over the whole population, the per capita expenditure would be less than the amount of the tax subsidy to private sector users.
22. The Chinese system comes fairly close to this arrangement. At secondary and tertiary levels of care, there is only one sector providing care and this is charged for. The methods of financing used to pay these charges depend on whether the patient is a government employee, a commune or brigade worker, a factory worker, a dependant of a worker, or not covered by any risk sharing arrangement in which case (s)he must carry the full cost privately. Prescott N & Jamison D T. Health Sector Finance in China. *World Health Statistics Quarterly,* 1984, 37(4): pp387 - 402.

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43. *Financial Mail* November 29, 1985, op.cit. pp 37

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other than what was already being written about. We were in no competition with fraternal journals which were focussing on these issues. And most of the ongoing debate on the three issues, whether in the mainstream or in the alternative press were themselves major contributions to the radical critique of health. There was another perhaps more important reason. For all of us on the collective the ***RJH*** was the second or third area of activity. That is all of us at different levels with different groups were already very much involved with these issues. The other forums, such as the **medico friend circle, the All India Drug Action Network, The Health Services Association and the West Bengal Drug Action Forum, Kishore Bharati,** women's groups and others, were putting in a tremendous effort to generate a public debate on critical problems in these areas. By tacit consent we decided to put our energies into these for a rather than in brin out substantial material in the ***RJH***.

What now? Do we still feel that the journal can fulfill a need? Have we contributed to the development of a marxist debate on health care? Certainly things have changed much since we began. For one thing the last four years have seen an upswing in the interest in and awareness of health issues. Interestingly the three issues we mentioned above have been both a cause and consequence of the changing situation. During this period we have also seen a large number of health periodicals, some occasional, some regular, emerge. Also, publications encompassing a broader canvass of social analyses have begun to devote more space to health issues.

We do not attempt here to answer these questions. Because we really have no means of evaluating the ***RJH*** qualitatively. We invite you, our readers new and old, to give us your feedback. Because after all the whole point in starting this journal was so that it could provide a forum for participating in the evolution of a radical, marxist critique of health. In the meanwhile we will continue to do our bit as best as we can.

So here comes a fifth year of ***RJH!***

Padma Prakash

Health Care, Health Policy and Underdevelopment in India

ravi duggal

SINCE independence health policy making and the design of health programmes (like all other development programmes) have been guided by programmes of imperialism. As a result the Indian peripheral population has been denied state-sponsored health care services (that exist theoretically) and have instead had to depend on the vagaries of the market forces in which operates the overwhelming private health sector that has virtual monopoly of curative health services, being supported to the hilt by the multinational pharmaceutical industry. Privatisation, high technology, population control, low-cost models, aid and the consequent dependency are the means imperialism uses to shape our health policy and programmes.

THE underdevelopment of health is not an original state, but an active process generated by imperialist exploitation. Thus the nature of the third world health problems and the obstacles to their solution are to be found primarily in the structure of the economic relations historically created between the capitalist powers and their satellites. This is reinforced by the economic and social relationships created by imperialism within particular underdeveloped countries. [L Doyal and I Pennel. *EPW* August 1977]

The links of underdevelopment with imperialism are today well established. The world systems approach [Baran, 1975; Frank, 1967, Amin, 1974; Wallerstein, 1976] that critiques the developmentalist paradigm of liberal political economy has also looked at the health sector, then it moves on to discuss the underdevelopment of the health sector in India establishing the linkages with imperialism based on an analysis of health and population control policy.

Modern medicine got established in the developed world only in the last quarter of the nineteenth century. And now for over a century it has prospered under capitalism and has spread globally under imperialism expropriating the health of the people. In developed countries sanitary reforms and other public health measures had provided the foundation on which modern clinical medicine could grow and flourish. This did not happen in what are today's underdeveloped countries because the latter were colonies of imperial powers. In underdeveloped (colonial) countries modern medicine developed as an enclave sector and therfore, though early in introduction, modern medicine catered to a very small proportion of the population.

The phenomenal growth of modern medicine under capitalism in the last one hundred years and its expansion under imperialism had no doubt revolutionised medicine. But in its rushed growth to find a pill for every ill the medical-industrial complex, under the auspices of monopoly capital and imperialism has not only become an expropriator of health but also global expropriator of surplus through a network of large multinational corporations. Good health is not only a question of availability and accessibility of modern medical care but is also related to the basic question of the right and access to a comfortable, human standard of life.

Today the difference we see between the developed countries of the west and the undeveloped countries of Asia, Africa and Latin America is the gap that imperialism has created. The question is not one of lack of resources in the peripheral (underdeveloped) countries but that of expropriation of their resources by the centre (developed) countries. The world product today (far below level as which human beings can produce with the present level of productive forces) works out to over US $ 3500 per capita per annum. If equitably distributed this is sufficient to support a comfortable life-style for the entire global population. However in the present world the underdeveloped countries, which have over 3/4ths of the world's population, get only 1/5th of the share of the world's product [World Bank, 1984]. The situation in 1800, for instance was a little different. The same population of underdeveloped countries had 44 percent of the share of world output. Since 1800 the gap has widened because of the expropriation of surplus of the underdeveloped countries by developed ones, earlier through colonisation and now through imperialism. And this gap today is widening further because of the stepped up process of privatisation all over the world. Thus under capitalism and imperialism development alone is not possible-development is necessarily constructed on the foundation of underdevelopment. The growing of such a development (increasingly for fewer people) also means a growth of underdevelopment (increasingly for more people). [see Navarro, 1976] health sector.

A futher point to be noted with regard to the health sector is that it has historically belonged to the category referred to in western economics as the welfare or social sector. The argument is that a healthy population is essential for higher productivity. But under capitalism the production sector is unwilling to bear the burden of maintaining the health of the population, therefore this function is transferred to the state. The state collects taxes and makes provision for health care services either through its own delivery system or through subsidies or support of the private health sector. But with the strengthening of monopoly capital, contradictions of capitalism become completely bare and it seeks the support of the

state, the latter tripping into a fiscal crisis. The direct consequence is a demand by capitalism for a cut in social expenditures (health, education, welfare etc). However, at the same time monopoly capital is well prepared to take on social expenditures because new techonological developments have rendered this sector profitable. It is not that there were no profits in the health sector earlier-the pharmaceutical industry, private pracitioners, medical equipment manufacturers etc were grossing large surpluses. Only now, because of the new medical technology, large scale corporatisation of health services has become possible.

This development in the health sector is not restricted to the developed world. It has diffused very rapidly in the underdeveloped world further advancing (sic) the underdevelopment of health in these countries. The developed and the peripheral mass has less and less of basic health care. On the contrary, imperialism pushes 'new' low-cost, self-care models for the periphery. "In the health sector, we find substantial cuts in government health expenditures with privatisation and commodification of medical services, accompanied by the ever-present ideology of self-sufficiency and self-care brought to those peripheral countries by transmission belts of dominant core ideologies, such as the international agencies of aid". [Navarro, 1984].

Underdevelopment of Health in India

In India the growth of the health sector has followed the enclave pattern of development. Public health in India was completely ignored. Unlike Europe, India and most of the third world missed the opportunity of implementing sanitary reforms because they were colonised [for details see Ramasubban, 1985]. Even until today, because of the nature of capitalist medicine and imperialism, this simple and basic change has not been possible in underdeveloped countries—the entire focus of modern medicine is centred around the clinic and the only beneficiaries of this are the providers and monopoly capital. The recent cholera and gastro deaths in Delhi and other parts of India shows how underdeveloped public health in India is and it also proves the enclave sector pattern of development.

The genesis of an institutionalised health care delivery system in India began with the consolidation of British colonial rule. The motive of the imperial government for providing such modern and sophisticated medical care was not to improve health care of the general Indian community but as a concern for the health of its own armed forces and civilian administration. This very enclave sector introduction of modern medicine in India became the basis of its growth in the country. This pattern continues even today. Upto the end of the war modern medicine in India was not introduced to the periphery at all. It was only available to the rich Indians and civil servants, besides the Britishers and the Indian Army. With the advent of provincial government after the Government of India Act 1919, some semblance of a medical care network evolved. By 1941 India had 7441 hospitals and dispensaries (2150 hospitals). For rural areas there was one unit (hospital and / or dispensary) per 45,966 population and for the urban areas one unit per 16,913 population. (only 7.6 per cent of all these units were in the private sector) [Government of India, 1946]. Anyway, these facilities were too meagre to be of any significance, especially considering the fact that they largely catered to a select population.

Compared to any significant health care delivery system in the developed world the facilities and investment in India were miniscule and of little consequence for the health of its population. For instance, before the start of the second world war India had a bed/population ratio of 0.24 beds for 1000 population with a state expenditure of about 16 annas per capital only (5 per cent of Government expenditure), compared to Britain and USA which had bed/population ratios of 7.14 and 10.48 beds per 1000 population and a state health expenditure of Rs.54-8 annas 12 pies and Rs.51 -6-0 per capita (20.4 per cent and 13.8 of government expenditure), respectively [Government of India, 1946]. The fact is that Britain's and USA's state health expenditure was equivalent to India's national income and their health care even worse today. In 1984 health expenditure in the USA was $ 15.80 per capita out of which state expenditure accounted for 41 per cent (Levit et al,1985). By comparison in the same year health expenditure in India was only Rs.50 per capita. State private expenditure in 1984 is estimated at Rs.47 per capita by the CSO [GOI, 1988] but is more likely around Rs. 190 per capita [Duggal, 1986]. Even taking the latter estimate of private health expenditure in India, the USA spends 66 times more on health than India. Futher, the US health expenditure alone in 1984 was eight times that of India's national income (state health expenditure alone of the USA was 3 $^1/_2$ times India's GNP).

In India the Bhore Committee Report had provided the first insight into dimensions needed for a comprehensive health care system in India. It was a plan that was almost equivalent to Britains own national health service but having features closer to the Russian model because of Dr. Sigerist's and Prof.Ogenov's influence [GOI, 1946]. The committee stressed that suitable housing, sanitation and safe drinking water were primary conditions for good health was not to be equated with health services or illness care. The beneficiary was identified clearly as the tiller of the soil and the committee drew pointed attention to his plight. Specific groups such as women and children and industrial workers, were also paid special attention." [Giridhar et.al.,1985].

However, after independence the Bhore Committee Report remained unimplemented. The main reason for this, as also for the poor performance of other social

sectors, was the role of the Bombay plan (also known as Tata-Birla Plan) in shaping India's economic policy. Briefly, the Bombay Plan directed the nation's economic policy to serve the needs of private capital by making the state invest in heavy economic infrastructure, under the cover that such participation by the state in economic production would evolve a socialist society. That was as far as Nehru's socialism went and the private sector got state subsidised capital goods and services sector (steel, minerals, transportation, communmication, finance capital etc.) from which to reap benefits. It is clear that state investment has historically dominated in areas which helps the growth of private capital.

In the health sector the government let private practice of medicine flourish. For instance the government subsidised significantly the growth of private medical practice by training medical personnel from tax-payer funds and by providing bulk drugs at very low prices to private formulation units. However, the government took the entire responsibility of public health largely preventive and promotive programmes with curative services (the primary need of the population in terms of demand) taking a back-seat.

Investment in Health Sector

As mentioned earlier, at independence the investment in the health sector was marginal. Hospitals, dispensaries, health centres, health personnel and pharmaceutical production were abysmally low to have any impact on the health of the population, especially the poor masses. Between independence and today the growth of the state health sector has not kept pace with the needs of its population and quality.

Between the beginning of the first plan and 1986 the number of hospitals have increased from 1,694 (1,17,000 beds) to 7,474 (5,35,735 beds) but in terms of availability to the population the situation has not very siginificantly improved. Thus in 1951 one hospital served 1,34,001 population (3,085 population per bed) and in 1986, 1,003,48 population (1,400 population per bed). The situation gets worse when we look at the rural - urban differentials. For the earlier years this figure is not available but even in 1986 only 21 per cent of the hospitals (and 12 per cent of the beds) were located in rural areas, one rural hospital serving 3,49,394 rural population, and one rural bed serving 8,135 rural population. In comparison to this in the same year one urban hospital served 34,281 urban population and one urban bed served 432 persons in the urban areas. In 1956, 24 per cent of all beds were in rural areas but in 1986 this figure had declined to 12 per cent (GOI-CBHI, respective years). Further when we consider access factors like morbidity rates, sanitary conditions, malnourisment etc, the rural health sector investment appears to be only a marginalised investment. (See Table 1).

It also appears that compared to the growth of the private health sector the growth of the state health sector is very slow. For instance in 1974, 16 per cent of all hospitals were in the private sector (16.2 per cent beds) but within a decade in 1984 private hospitals had grown to 42.3 per cent of all hospitals (26.7 per cent) (Ibid). This means that availability of health care for the poor classes, who constitute more than 3/4th of the population, is becoming more and more expensive as they have to increasingly rely on market forces.

The urban population, besides having the cream of the state and private health services also have access to relatively good and well organised local-body sponsored health services, and the organised sector working class in addition has the benefit of having either health insurance [ESIS, CGHS] or reimburesement of costs (by employer) or even special health care facilities by railways, mines, defence, public sector undertakings, corporate health facilities).

To check this imbalance a network of primary health centres have been established to cater to the needs of the rural population. Between 1956 and 1986 the ratio of population served by one PHC has changed from 5,51,724 to 88276 but no siginificant impact on the health of the population is perceptible. The problem with this is that PHCs are different from hospitals and dispensaries. People's need and demand is for curative services (i.e. hospitals and dispensaries), rather than public health and family welfare. On an average only 1/5th of PHC funds and time of the staff are spent on curative services when over 90 per cent of those who visit the PHC seek curative care. When curative care supply in such institutions increases, such as in case of upgraded PHCs, its utilisation by the population also increases. Similarly a good PHC doctor (in terms of providing curative care) increases the patient-load of the PHC substantially.

Drug production is one area (the other being the production of doctors) in which considerable success has been achieved and the targets surpassed. The reason is simple that profitability is high and an effecient (even though largely irrational) pharmaceutical industry is the lifeline of private practice of medicine and vice versa. Pharmaceutical formulation production (including net of import/export) has increased from Rs.51 crore in 1956 to Rs.1993 crore in 1983 [FRCH, 1987]. In terms of population served, this means drug availability of Rs. 1.30 per capita in 1956 and Rs.27.68 per capita in 1983.

But the most important segment of the health sector in India is the private medical practitioner. Today there are over 700,000 medical practitioners (including institutionally and non-institutionally qualified and non-qualified from all systems of medicines); out of these 36 percent (250,000) are allopaths. Besides this there are about 800,000 paramedics, pharamacists, nurses, various medical teachnicians etc. Of all qualified allopathic

practitioners only 28 per cent are located in rural areas and out of these 40 per cent work in the government's rural health institutions. Of all non-allopathic (qualified as well as others) practitioners. 56 per cent work in rural areas; and from among these only 2 per cent work in the state health sector 6 per cent of qualified non-allopaths) and of course, most of them practise allopathy. So here again we see that rural-urban differentials are very marked. And finally what is the proportion of medical professionals working as private practitioners? Of the qualified allopaths about 172,000 (or 69 per cent) are in private practice. And of all the non-allopathic (qualified and not qualified) practitioners 90 per cent of 400,000 work as private practitioners. This means that about 5,72,000 practitioners (one per 1300 population) of all sorts constitute the largest chunk of the health sector, [extrapolated from Census -1984; GOI, 1986].

This overview of health infrastructure development and investment in India clearly shows that the pattern of growth of the health sector in India has only contributed to its underdevelopment. The three high growth areas of medical education, pharmaceuticals and private practice have only helped imperialism and monopoly capital. Development of health care service has been concentrated in the enclave sector benefitting largely the urban-enterpreneurial economy. Health care services, like all other sectors of the economy, in the periphery are backward and what little exists is both poor quality and of difficult access.

There are various issues health and non-health, involved in this debate.In this article the discussion is limited to the nexus between imperialism and the health and population control policy in India and how they perpetuate underdevelopment.

Health Policy and Imperialism

In the colonial period health policy was unabashedly in favour of the enclave sector. The periphery existed only for expropriation, not deserving even lip sympathy. However, a few years prior to Independence both the Government of India and the Indian National Congress decided that the health of the periphery needed attention. The now famous Bhore Committee and the National Planning Committee's reports on the health situation in India and what could be done about it appeared on the eve of independence. Both these reports clearly favoured the establishment of a broad based integrated national health system that would be equally accessible to the entire population, irrespective of their ability to pay.

The Bhore Committee report used the Flexner Report of the USA as its basis in chalking out the plan for health care services for India but the influence of both the British National Health Services that was then emerging and the Russian model are clearly perceptible. However, it is evident that the Bhore Committee Report was clearly designed within the framework of welfare economics. It is a different matter that most of the recommendations of the report were rejected by the Indian state because the shrewd Indian bourgeoisie preferred a system of health care services where health care and medicine would be commodities (for instance the then prevailing Indian Medical Service that could have become the foundation of a national health service, was truncated and finally dissolved). The state was given the responsibility of public health and health care services for the periphery. The state was also made to provide the infrastructure medical education and research, bulk drugs, tax rebates and subsidies. Private medical practice developed as the core of the health sector in India initially strengthening the enclave sector, then gradually spreading into the periphery as opportunities for expropriation of surplus by providing health care increased due to the expansion of the socio-economic infrastructure. It must be noted that this pattern of development of the health sector was in keeping with the general economic policy of capitalism. And Indian capitalism had clear links with imperialism. Thus the health policy of India cannot be seen as divorced from the economic and industrial policy of the country. In India until recently there was no formal health policy statement. The policy part and parcel of the planning process (and various committees appointed from time to time) which provided most of the inputs for the formulation of health programme designs. However what programmes were to receive priority was decided by imperialism.

In the early years after independence the Indian state was engrossed in helping and supporting the process of accumulation of capital in the private sector through large scale investments in capital goods industry, infrastructure and financial services. Social sectors like health and education were low priority areas. Industrial growth was the keyword. But by the end of the fifties imperialism had convinced the Indian state and the bourgeoisie that if the periphery was left out of the development process then not only surplus expropriation but the existence of capitalism itself would be threatened. Imperialism did not want another Cuba or China. Earlier the US patented CDP had failed. Thus the Green Revolution and subsequently other rural development programmes came to India through assistance from the US Technical Mission and Ford and Rockefeller Foundations. Along with this came support for health programmes also. The aid that came to India was not only financial and technical but also political and ideological. The entire policy framework, programme designs and foci, financial commitments etc. were decided by the imperialist agencies. For instance, during the fifties malaria, which constituted, an international threat, was the main focus of our health care delivery system an overwhelming majority of the health budget going into spraying out the mosquito menace. This priority was dictated largely by US imperialism - 78 per

cent of the US (health) technical assistance and 68 per cent of PL 480 grants went to malaria control and eradication [USIAD, 1976]. Similarly in later years small-pox eradication assumed importance. This time 57 per cent of all WHO assistance to India between 1973-76 went to small-pox eradication [WHO, respective years].

In the fifties and sixties the entire focus of the health sector in India was to manage epidemics. The health infrastructure remained grossly inadequate, catering largely to the enclave sector (see Appendix 1).

Another area of imperialist influence has been medical education and research. The entire curriculum of medical schools in India is oriented to serve western capitalism. Trained medical graduates, who have studied in public financed medical schools have migrated to western capitalist countries en masse, the latter gaining cheaply (for them) trained medical manpower. Imperialism directly perpetuates this form of medical education and migration centres of medical excellence in India (AIIMS, PGIMR etc.) have been funded by imperialist agencies. For instance between 1950 and 1974, 98.7 per cent of all health sector assistance by the Rockefeller Foundation to India went to medical education and research [Rockefeller Foundation, respective years].

In the early sixties, alongwith the great push given to the Green Revolution imperialism was preparing the ground for a fundamental change in India's health policy. The epidemics that were being controlled were bringing down the death rate rapidly. The consequence was a sudden spurt in population growth. India already had an official population programme but in the Mahalanobis scheme of things population growth was not a priority factor in planning. For imperialism the high growth of population (compared to their own declining growth) in India and rest of the underdeveloped world was a major threat. The initial beginnings in guiding this policy change in underdeveloped countries was routed through private foundations of American capitalism [for details see Mass, 1976]. In India, for instance 84 per cent of all Ford Foundation health sector aid between 1955 and 1979 went to population programmes and reproductive biology [Ford Foundation, respective years].

In the first two plan periods the family planning programme was mostly run through voluntary organisations under the aegis of FPAI which received funds mainly from IPPF, Population Council and the FPA of Britain. It was only during the third plan that government agencies began to actively participate in pushing population control. It was at the end of the third plan that Family Planning became an independent department in the Ministry of Health (meaning its status for financial commitments etc. would be increased substantially) and the camp approach was tried out for the first time under the advice of the Ford Foundation. The budget Sky-rocketed from a mere Rs. 2.2 crore to Rs. 25.0 crore (an increase of 1036 percent as compared to only a 128 percent increase for the entire health sector) [Government of India 1982].

During the same time US imperialism had made inroads into the United Nations policy with regard to population control [Mass, 1976]. Following this in 1966 a UN advisory mission visiting India strongly recommended that population growth must be curtailed immediately and for this the resources of the health sector were to be used. "The directorate (Health and Family Welfare) should be relieved from other responsibilities such as maternal and child health and nutrition. It is undoubtedly important for Family Planning to be integrated (it had been integrated with MCH in 1963) with MCH in the field, particularly in view of the 'loop' programme, but until the family planning campaign has picked up momentum and made real progress in the states, the Director General concerned should be responsible for family planning only. This recommendation is reinforced by the fear that the programme may be otherwise used in some states to expand the much needed and neglected maternal and Child Welfare Services" [UN Advisory Mission, 1966].

Taking the cue the Indian government for the first time evolved a traget-oriented approach for sterlisation and the IUD programme. Resources were considerably enhanced and in the first year of its implementation the 'loop' programme netted a phenomenal 8.13 lakh acceptors (much more than sterillisations which had started 10 years before it). And with regard to sterillisations the number of female acceptors also increased substantially.

The above was made possible by redirecting the efforts and inputs of the Third Five Year Plan's ANM-subcentre health scheme, which was mainly designed to reach out health care to women and children, the most vulnerable section of the population. Before this massive investment of the third plan could reach its target, population with the various health programmes — child immunisation, ANC, PNC, domicilary curative services, preventive and promotive health programmes — the imperialist agencies had reoriented the policy to attacking the 'population menance'. Thus the entire basic health care services which were designed for the periphery were reduced to a population control programme at the behest of imperialism. This distortion of an already underdeveloped health sector continues even today.

The population control strategy was based on the imperialist hypothesis that imporved health care necessarily accelerates population growth. [World Bank, 1980; Mass, 1976]. Therefore to check population growth health intervention was to be kept at a minimal level, a level that would generate adequate surplus labour to perpetuate exploitative relations. This was to be realised through heavy financial assistance and export of the ideology of the 'population bomb' by the imperialist powers. The pattern of financial assistance and population growth in

underdeveloped countries is given in Table 2. It shows that the initial lead was taken by private organisations (mostly foundations of the corporate sector) and gradually transferred to bilateral and multilateral agencies through their influence.

(It is also evident that two decades of vast financial commitments did not dampen population growth in underdeveloped countries. Their hypothesis was proved incorrect but this did not decrease their interest in population control. Their own studies in the seventies showed that in underdeveloped countries there were strong economic reasons for high fertility. The nature of the subsistence economy makes it expedient for a household to have a large family so that exploitation of fluctuating opportunities of source of income can be maximised, especially so when most of these opportunities coincide in a particular season — monsoon in India [Chaudhary, 1982]. Also under such conditions children are highly cost-effective. The cost of their raising far outweighs the benifits that arise due to their plenitude children contribute substantially to households through their labour (not necessarily wage-labour) in the fields, outdoor activities (fetching water, firewood etc) and household maintenance (babysitting, cleaning etc.) [Caldwell, 1977; Epstein et. al., 1975; Hull, 1977; Nag, 1978]. Further, these studies also indicated that an important determining reason for high fertility was high infant mortality. The World Bank selectively picked up this latter point [World Bank 1980] and advocated the "child survival hypothesis" to replace the older one mentioned earlier. That is, significant effort needs to be invested in assuring the survival of children so that parents can visibly perceive lower infant and child mortality rates. Thus, instead of direct support to population control activities support to universal immunisation of infants, children and pregnant women becomes the key for achieving lower levels of fertility. Related to the child survival hypothesis is the corollary of 'safe-motherhood'. This corollary is essential because of high maternal mortality and neonatal mortality rates. It is unfortunate that these important issues of survival are being-dealt from the perspective of lowering fertility. In India the current mission approach (Sam Pitroda variety) to immunisation is a case in point. It may be further noted that the issues related to the subsistence economy of underdeveloped countries referred to above have been completely ignored because the underdeveloped countries can overcome their subsistence nature only with the destruction of imperialism.

The Indian state and bourgeoisie have found this imperialist ideology beneficial for their own survival. All problems (especially economic and health) are linked by them to overpopulation. For capitalism and imperialism it is important to regulate fertility because surplus labour beyond a certain level can pose a threat. (The World Bank calls it the spectre of communism). Further, modern capital intensive technology makes generation of surplus labour under capitalism even easier, thus making the need for population control even more urgent.

Population control policy is one area of imperialist intervention in the health sector of underdeveloped countries which has kept health care services underdeveloped in these countries. The other area is promotion of low-cost primary health care for the periphery of these countries.

In India the Narangwal experiment in Punjab in the sixties set the framework for the 'low-cost' 'self-care' approach [Johns Hopkins 1976]. Following this similar experiments and projects were undertaken in Maharashtra and other states by various non-government organisations (Jesani, et.al. 1986). The consequence of this was the questioning of the medical model (especially the Bhore Committee) and promotion of a "community" health care approach. This proliferation of NGO experiments and models became the basis for an important change in the health policy framework of the state. The population control obsession of the health policy of the decade between 1966 and 1976 suffered as set back, albeit temporary, after it had reached its peak during the emergency.

It is interesting to note that the liberal western economies offered full support to the coercive population control activities during the emergency by stepping up their financial assistance for the family planning programme. When in 1976-77 the state's expenditure in family planning increased by 114.6 per cent over 1975-76 (and sterilisation by 204 per cent, assistance by imperialist agencies (bilateral and multilateral) increased by 50.8 per cent in the subsequent year. But when the Janata government came to power in 1977 and government expenditure declined by 46 percent (and sterilisation declined by 88 per cent) the cut in international aid for the subsequent year was 43.4 per cent. And to prove that this was not a mere coincidence the coming back to power of Congress (I) in 1980 increased population control aid by 111.7 per cent [Government of India, 1982].

In the mid-seventies a global change in the health strategy in underdeveloped countries was being worked out by the international agencies. It emerged in the form of Alma Ata declaration of 1978. India had anticipated this earlier with the influence of NGO models which were mostly funded by international agencies [Jesani et.al.1986].

India had officially started with the Community Health Worker Scheme (now called Community Health Guides) in 1977 with the idea of decentralising further the PHC and subcentre model which had failed to work, except in meeting Family Planning targets. There was no guarantee that the CHW scheme would not end up pushing family and planning traget precisely the same thing happened.

Before the introduction of the CHW efforts had been made to integrate the paramedical workers of the vertical health-programmes (malaria workers, vaccinators, ANMs etc.) through the multipurpose worker scheme as suggested by the Kartar Singh Committee. This integra-

tion idea had again emerged from the Narangwal experiment. "The committee unanimously agreed that the concept of multi-purpose workers at the periphery was both the operational research experience of Narangwal, Gandhigram, conclusion" [Giridhar et.al.,1985]. But the integration did not help in anyway in even starting the process of deceleration of the underdevelopment of health in the periphery. On the contrary all the health workers (alongwith many non-health workers, supposedly to justify the promise of interdepartmental cooperation and integration) were laden with carrying the burden of population control targets.

The consequence of this, over the years has been that the state's health care services in the periphery are today viewed by the people as family planning clinics. People in general have developed a distrust for the state's health care delivery system. Thus, thanks (sic) to imperialism primary health care, health services integration and Universal Immunisation Programme 'child survival') have become 'new' flag-carriers of the population bogey.

In the midst of all this for the first time in 1983 an official National Health policy (NHP) was announced. It was largely based on the ICMR-ICSSR Committee Report [ICMR/ICSSR, 1981]. The policy states: India is committed to attaining the goal Health for All by the year 2000 A.D. through the universal provision of comprehensive primary health care services. The attainment of this goal requires a thorough overhaul of the existing approaches to the education and training of medical and health personnel and the reorganisation of the health services infrastructure. Furthermore, considering the large variety of inputs into health, it is necessary to secure the complete integration of all plans for health and human development with the overall national socio-economic development process, specially in the more closely health related sectors, e.g. drugs and pharamaceuticals, agriculture and food production, rural development, education and social welfare, housing, water supply and sanitation, prevention of food adulteration, maintenance of the prescribed standards in the manufacture and sale of drugs and the conservation of the environment. In sum, the contours of the National Health Policy have to be evolved within a fully integrated planning framework which seeks to provide universal, comprehensive primary health care services, relevant to the actual needs and priorities of the community at a cost which the people can afford, ensuring that the planning and implementation of the various health programmes is through the organised involvement and participation of the community, adequately utilising the services being rendered by private voluntary organisations active in the health sector [Government of India, 1983: point 5, pgs. 3-4;]

Very progressive and comprehensive indeed! but all this gets pushed into the background with the paragraph that follows the above: Irrespective of the changes, no matter how fundamental, that may be brought about in the overall approach to health care and the restructuring of the health services, not much headway is likely to be achieved in improving the health status of the people unless success is achieved in securing the small family norm, through voluntary efforts, and moving towards the goal of population stabilisation. In view of the vital importance of securing the balanced growth of the population, it is necessary to enunciate separately, a National Population Policy [Ibid: Point 6, pg.4]

There is ample evidence in implementation of this policy to prove that the population control programmes emphasised in the NHP has been accorded an overriding focus in the "comprehensive primary health care programme" and rest all (specified in the first quote from NHP) is just for the record!

The consequence of this health policy making in India and the resultant programmes with the assistance, guidance and ideological inputs of imperialism has kept the health sector underdeveloped. Even today in India 80 per cent of all health resources and medical manpower are located among the 25 per cent urban population when 75 per cent of the country's population resides in rural areas: even in urban areas 80 per cent of the health resources are accessible only to the top 20 per cent of the socio-economic strata. This shows that the enclave sector structure of health care services continues even today.

Inspite of this apalling situation the government is talking of privatisation of health services : The policy (NHP of 1983) envisages a very constructive and supportive relationship between the public and the private sectors in the area of health, by providing a corrective to re-establish the position of the private health sector.... with a view to reducing governmental expenditure and fully utilising untapped resources, planned programmes may be devised related to local requirements and potentials, to encourage the establishment of practice by private medical professionals, increased investment by non-government agencies in establishing curvative centres and by offering organised logistical, financial and technical support to voluntary agencies active in the health field [Government of India, 1983].

This process of privatisation is not confined to India or to underdeveloped countries but has also been going on in western developed countries which have state supported health programmes. Further privatisation is not limited to the health sector but extends to all sectors of the economy. Privatisation is a response of imperialism both to firm its control of the international economy so that any process of socialisation of production and services is truncated and reversed, and a response to tiding over the fiscal crisis of the state.

This process has begun in India too in a big way. But this is in contradiction to the policy of promotion of low-cost self-care health models. However, this contradiction does not appear sharp because of the enclave structure of our

economy. The high technology and corporate health services are for the few who already have more than adequate health services accessible to them, and the low-cost models are for the periphery.

The low-cost model strategy is a deliberate attempt to keep health care out of the reach of the periphery because without the latter's underdevelopment the over-development of the centre cannot exist. This takes us back to the Bhore Committee model which talked of a level of development of the health sector for India which was on par with developed countries during that time. That level of development is the minimum required if health care services must be adequately available to all. The Bhore Committee also re-commended that health services should be available free of cost to everyone. The rejection of the Bhore Committee report as a policy statement and instead shaping our health services over the years on the whims and fancies of imperialism is one of the important causes in underdevelopment of the health sector in India. Of course the Bhore Committee could only have been implemented if our economic policy had also been radically different.

[Conclusions]

To sum up the discussion one can conclude that the underdevelopment of health care services in India (and similarly in the rest of the underdeveloped world) is part of the process of underdevelopement which is the consequence of monopoly — capital and imperialism. Imperialism controls, monitors and manipulates every aspect of the social structure to the extent that it also expropriates the culture and mind of the population in under-developed countries. Our policy makers, planners are brainwashed and bought over so that our underdevelopment is perpetuated for the development of imperialism. Thus for a small investment in brainwashing and a paltry financial assistance imperialism is able to sell underdevelopment to underdeveloped countries.

Since independence health policy making and the design of health programmes (like all other development programmes) have been guided by programmes of imperialism. The core of the entire health policy and programming of the Indian state has been population control. This has been largely due to imperialism's successful propagation of the 'population bomb' phenomena. As a result the Indian peripheral population has been denied state sponsored health care services (that exist theoretically) and have instead had to depend on the vagaries of the market forces in which operates the overwhelming private health sector that has virtual monopoly of curative health services, being supported to the hilt by the multinational pharmaceutical industry. Today the policy of privatisation is making the scenario for the periphery even worse.

Privatisation, high techonology, population control, low-cost models, aid and the consequent dependency are the means of imperialism to shape our health policy and programmes. Imperialism exploits, expropriates, creates dependency and generates underdevelopment, both within and outside the health sector. And to prevent underdevelopment from getting out of its control imperialism keeps throwing up new tricks (or old tricks in new garbs) each time the contradications of its existence threaten to knock it down. In India too these new tricks have surfaced time and again and have helped underdevelopment survive, even though breathless.

Table 1 : Growth of Health Infrastructure and Investment in Population ('000s) Served Per Rupees Per Capita

	POPULATION (000s) SERVED PER					RUPEES PER CAPITA		
YEAR	HOSPITAL	DISPENSARY	PHC (RURAL)	HOSPITAL BED PERCENT	MEDICAL COLLEGE	QUALIFIED ALLOPATH DOCTOR	DRUG PROD-UCTION	STATE HEALTH EXPEN-DITURE
1951	130(NA)	55.4	-	3.2 (NA)	12890	5.8	0.96	0.9
1956	120(NA)	56.3	550	2.5(25%)	8230	5.5	1.30	1.60
1961	140(NA)	46.7	140	1.9 (NA)	7310	5.4	2.27	2.67
1966	120(NA)	48.3	80	1.6 (NA)	5410	4.2	3.90	4.13
1971	140(NA)	50.3	80	1.7 (NA)	5770	3.6	6.11	6.86
1974	150(16%)	60.3	80	1.7(13.2%)	5530	2.9	7.55	11.71
1982	100(44%)	41.7	90	1.4(13.4%)	6600	2.5	27.87	36.26
1986	100(45%)	27.9	90	1.4(12.5%)	7070	2.5	NA	53.94

Compiled from : *Handbook of Health Statistics*, CBHI, respective years; *Combined Finance and Revenue Accounts*, CAG, respective years; Commerce (supplement) *Pharamaceutical Industry - A Growth Perspective November 12, 1977. Health Status of the Indian People*, Sonya Gill (ed,), FRCH, 1987.

International Assistance for Population Control 1960-1980.
Assistance by Selected Major Donors (000's US$)

Year	Western Government	Multi-Lateral Agencies	Private Organisations	Population Change in Underdeveloped Countries Over Last Decade (Percent)
1960 *	91	..	3107	22.4
1970 *	87187	18750	56012	25.6
1980 **	369800	287900	16000	31.6

Source : * Quoted in World Bank Staff Report : *Population Policies and Economic Development*, John Hopkins Press 1979.
** Compiled from *Population Reporters* January-February 1983, Population Information Programme, John Hopkins 1983.
*** World Bank, *World Development Report*, 1983.

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Health on Political Agenda in Pakistan

SAR

In April 1987 the Pakistan People's Party (PPP) released a well-researched and scholarly document entitled the People's Health Scheme, which together with Benazir Bhutto's speech at that time may be taken to comprise the party's health manifesto. Can the PPP hope to implement it successfully in the event it comes to power?

(Reprinted from Viewpoint, *July 16, 1987)*

THE People's Party has issued a 72-page document entitled the People's Health Scheme. The document was released on April 30, 1987, at a function attended by Benazir Bhutto, whose speech is also included in the document of the party. Given its inclusion, one assumes that it is also part of the document, as it does indeed raise a number of very relevant points.

Before I proceed to the contents of the documents, there are some things which need to be said about the presentation of the document. I have been most impressed by the document, for it is one written by a group of professionals who seem to know their stuff well. The document has numerous references to statistics and publications from the government and international sources, thus giving it great credibility and authenticity. The statistics have not been presented just for the sake of the exercise and a very intelligent and well-researched methodology has been used.

The People's Party is the only political party which has openly and courageously expressed its views on numerous issues, all in published form. Whether one agrees with the contents of the published stands of the party, or with the ideological approach of the party, is something different, but at least we have the opportunity to know its stands and then make a decision for ourselves. Further, despite the fact that some of their published documents have come in for a lot of stick (the Awami budget, the Labour policy), the party has continued the process of making its attitudes public, all backed up by hard facts. It goes to the credit of the People's Party to be able to organise teams of experts on various subjects and then to publish and make public their views.

In her speech which serves as a preface to the document, Bhutto has raised some relevant points about the health system in the country today. She has lamented the plight of doctors, their unemployment and poor renumeration; the role of the last PPP government has been discussed and Benazir has cited the opening of medical colleges, large hospitals, and expansion of facilities under Bhutto; she has clearly understood the causes of ill health when she says "Good health is less the work of doctors and hospitals than of advances in public health. We need improvement in clean water and sanitation; improvement in housing and nutrition"; she has also understood the need for a healthy and educated society in order to build for growth and progress. She has also recognised the fact that of the 10,000 medicines produced in Pakistan, only 250 are needed, as recommended by the World Health Organisation. She has promised to supply the minimum number of essential medicines at very low prices and intends to keep in line with the WHO recommendations.

The salient features of the main report are as follows:

(i) To decentralise the entire health set-up by creating elected District Health Officers — democratisation at the local body level.

(ii) The upgrading of public health services.

(iii) A broadening of the social security scheme.

(iv) The private health sector will be given incentives to improve and enlarge its scope and will be completely separated from the public health sector. General practitioners will be given soft loans for buildings, equipment and cars.

(v) All medical graduates will be given jobs as soon as they finish their house jobs and rural service.

(vi) A National Formulary for drugs based on the WHO list will be introduced and these will be made available even in the smallest villages of Pakistan.

(vii) The obsolete Mental Health Act shall be replaced and new laws according to the present needs will bemade.

(viii) Laws relating to quackery shall be strictly implemented.

(ix) Hikmat and Homoeopathy will be formally organised.

This seems to be a rather comprehensive programme which should be a positive step towards providing 'Health For All' by the year 2000. It is not the purpose of this article to either belittle the programme of the People's Health Scheme, or to find faults with it, or to point out all that could have been said and which was not mentioned in the document (the role of multinational corporations in the provision of drugs). The purpose is to analyse the programme, which on paper seems to be quite good, within the broader social, economic and political structure of Pakistan, for one cannot look at health, or education, or employment, out of a wholistic context.

It is my contention that the problems of health care in the country are linked directly to the prevailing social, economic and political system that determines the alloca-

tion of resources within or outside the health sector. It is this class system which is responsible for the lack of adequate infrastructural and health facilities in rural areas and urban slums and this class system is also responsible for the reluctance of doctors to practise in these areas. Very briefly and in a simplified manner, we can identify five basic issues in the health sector today which affect the distribution and availability of health care.

Urban and Class Bias

The first point regarding the health system which strikes us is that despite the fact that 70 per cent of the population lives in rural areas, most of the medical and health facilities are found in the cities. For example, 85 per cent of the practising doctors work in urban areas giving a doctor : population ratio of 18.01 for urban areas and 1:25.829 in rural areas. In Sind, the rural doctor : population ratio is 1:57.964. For nurses, this ratio in Sind is an astonishing 1:58. Similarly, 23 per cent of the hospitals in the country are located in rural areas and only 8,754 beds are available for a population of 60 million.

This 'urban bias' in health (and almost all other) facilities exists due to a few reasons. For one, the ruling class, whether, bureaucrats, military personnel, industrialists, and even absentee feudal landlords, live in cities and enjoy the fruits of 'development'. Secondly, organised, articulate and politically active groups, such as trade unions, students and professionals, who live in urban areas, have also acted as pressure groups and raised their voices to demand social infrastructure. The elite, the middle classes, and the politically 'noisy' sections of society live in the cities and, thus, it is largely this section which determines the allocation of resources. The 'natural' outcome will be an 'urban bias'.

It must be emphasised, however, that this 'urban bias' is an impressionistic bias and only reflects the geographical location of health services. There exists a deeper and more fundamental bias which is main determinent of access to health facilities. This is the class bias. The facts reveal that not all urban inhabitants have equal access to health facilities, nor are all ruralites equally discriminated against. It may be easier for a feudal landlord to have access to good health care than for a slum dweller in a large city, A 'basti' dweller may have 'apparent' access, in the sense that he may know of existing facilities, but it is not likely that he will be able to afford the high cost of quality private care. At the same time, the quality of care at a government hospital OPD which is available to him, where a doctor has less than 60 seconds for a patient, is indeed questionable. Similarly, for residents within cities, great differences in access exist. Those with money can afford the 'best and latest' technology and have immediate access to facilities, while the majority, like our slum dweller mentioned above, faces innumerable hurdles.

Thus, despite the apparent urban bias, we can conclude that irrespective of geographical location, it is class location which determines access to health facilities.

The purpose of medical education is to produce medical personnel who can work effectively in the existing model of health care in a country. Thus, the doctors produced after six or seven years of training in Pakistan are those who work best in the setting described above: one that is urban-care oriented, and work in the interests of the richer inhabitants of the country.

Medical students in Pakistan are taught from books written in and for the developed countries. The diseases our students learn about are more specific to developed capitalist nations than to underdeveloped ones. For example, they learn from their books that cardiovascular disease and cancer are the main killers, while the real situation in Pakistan is that parasitic and infectious diseases are responsible for 54 per cent of all deaths, while diseases of the rich and of western countries (heart disease and cancer) account for less than 2 per cent of deaths. The teaching methods and books leave such a profound influence on the students that they begin to believe that one of the main causes of death in Pakistan is indeed cardiovascular problems!

Not only does the diagnosis of the disease come from western sources, so does the appraoch to care and cure. The developed country curative care approach is copied in underdeveloped countries where the emphasis turns to urban-based hospitals. The teaching faculty plays a contributory role in accentuating this 'cultural imperialism'. Professors go to the west for training and urge their students to do the same to acquire skills in disciplines such as neuro-surgery and plastic surgery. When (if) these doctors return, they become even more aliented from the masses of their country, who live in urban slums and rural areas. Firstly, they lose touch with common ailments which afflict the poor, such as gastroenteritis and tuberculosis, and can deal best with the diseases of the rich. Secondly, and more importantly, the western-trained doctors are available to only a select few who can afford their high fees.

In underdeveloped countries like Pakistan, where most diseases are of a communicable and preventable nature, the emphasis should be on training doctors who are well-versed in primary health care techniques. Yet, the course in community medicine in medical schools is taken very lightly by students and teachers, who have no real community experience. Often one finds examples where qualified doctors are unable to cope with simple and common problems, such as snake-bite. The training and practical experiences of medical students are solely dependent on their interaction with patients who come to their

urban hospital, again, for a curative approach, when a preventive one may be preferable.

The explanation for this inappropriate medical education is quite straightforward. Since it is the ruling class which essentially determines the dynamics of the health sector, it is also responsible for the production of a specific kind of doctor. This ruling class requires a doctor who works best in a hospital-based curative-care setting and can deal effectively with the diseases of the rich of Pakistan, which are similar to those common in the developed countries. Consequently, the curriculum in medical colleges is designed to produce the desired product.

An important outcome of this type of education and training is the 'westernisation' of doctors. Since doctors in Pakistan are taught about 'western diseases', most doctors can, after some acclimatisation, work easily in hospitals in the developed countries. Our system of medical education has been a major reason for the medical 'brain drain' from Pakistan, with nearly 50 per cent of our doctors practising outside the country.

Had the curriculum been designed to suit the needs of the poor masses of Pakistan, with more emphasis on conditions in rural areas and urban slums, this problem would not exist. At present, given their medical education and doctor migration, the UDC's are subsidising the West!

One would think that, given the poor health status of the population and the poor distribution of facilities, a feature like doctor unemployment would be quite unheard of in Pakistan. But this is not the case. At present, government sources themselves claim that more than 11,000 doctors are unemployed in the country. On the one hand, the country is faced with this unemployment, while on the other, the infant mortality rate is 125 per thousand and the doctor-population ratio in rural Sind is 1:57964.

The crisis of the unemployed doctors has been brewing for a number of years and has only just exploded. Given the policy of successive governments towards health care, this crisis should have been anticipated. Governments have been obsessed with the urban-based curative-care approach and have accordingly built medical schools to provide for the main pillar of the system, the doctor. This one-sided approach to health care has backfired: by not building medical infrastructure to absorb the entire output from medical schools, the doctors have ended up without jobs. Had a more balanced approach been followed, and had facilities been built in accordance with the distribution of population, the doctors may have been able to find jobs, and some may have even considered moving out of the larger cities. Today the situation is indeed ironic and sad that despite the shortage of doctors in the country, the government has advised the unemployed doctors to seek employment in the Middle-East.

In Pakistan more than 7,500 medicines are produced despite World Health Organisation recommendations that only 250 are enough for underdeveloped countries. Significant 85 per cent of total pharmaceutical production in Pakistan is controlled by 15 MNCs!

There are two main reasons for this state of affairs,which is quite common in most underdeveloped countries. Firstly, in a country which supports a doctor-oriented curative-care model, the doling out of medicine becomes an essential requirement of the system. Doctors must have plenty of medicines to give to their patients. If, on the other hand, the approach to health care in Pakistan was prevention-oriented, with intervention taking place much earlier, the need for medicines would decrease and the cure would also be cheaper. The second reason for the continued prominence of pharmaceutical MNCs in UDCs is the link these MNCs maintain with the doctor community and with the state bureaucracy. Many MNCs sponsor international seminars with the ostensible aim of promoting medical science but which are essentially conducted to promote their own product. In many countries doctors are given numerous perks to promote certain medicines. Links with the bureaucracy are strengthened and influence is exerted to ensure favourable treatment in the case of pricing and production.

In the case of Pakistan, little research has been carried out on the pharmaceutical industry and it is time that some scholars took upon themselves the task to do so. It is important not only to know the profit that the MNCs made each year, but also to expose any unethical practices that they indulge in.

In 1978, a revolution took place in the field of health care. More than 130 countries signed a declaration in which they promised to give their people adequate health care by the turn of the century. Pakistan was one of the signatories to the Alma Ata Declaration.

Eight years have gone by since the signing, and only 14 years are left before this century comes to an end. Yet any impartial observer would be distressed by the status of health of the people of Pakistan. Not only have no significant changes been made in the last eight years, given the present trend none can be expected in the next 14. At best one can expect some small cosmetic changes within the warped health care structure in Pakistan, but no real indications exist for the overhauling of the structure itself.

Thus, it is quite clear that health care is a reflection of the social, economic and political structure prevalent in a country. If a small ruling clique controls the resources of a country and little or no participation by the people is

(Continued on page 32)

Continuing Disaster

The minority report of the Supreme Court Committee for Bhopal Gas Victims recently placed before the judges is a telling illustration of the impotency, inertia and inefficiency which charecterises our public funded research establishments. It also highlights a more fundamental issue : the growing signs of an erosion of authority of the judiciary and a disregard for legal processes. Tangentially, the report also draws attention to another aspect of the situation of Bhopal — that the disaster and all its ramifications have remained but a peripheral concern for opposition parties. As a consequence, little pressure has been put on the government, both central and state, to give the disaster the priority it requires.

The committee was constituted in response to a writ petition filed in July 1985 by Dr. Nishit Vora and others who were then in charge of a dispensary administering the only known antidote to the poisoning, sodium thiosulphate. The dispensary had been summarily closed down, its records seized and its doctors arrested. The petition pleaded for a court directive to the state government to allow the administration of NaTS. In August the court issued directions urging the state government to implement a time-bound scheme for detoxification as per the guidelines issued by the Indian Council of Medical Research in April that year. The state government on the pretext of seeking a clarification from the ICMR on the efficacy of the treatment even in August, did not reintroduce the programme.

On a reapplication by the petitioner, the court constituted the Committee for Bhopal Gas Victims comprising experts. Anil Sadgopal represented the petitioners and Dr Sujit K Das was nominated by the members. The committee was asked to specifically give recommendations regarding the detoxification with NaTS, the quality of medical relief being provided to the victims, the use and relevance of the various surveys being conducted at that time for determining compensation and to ascertain what further work needed to be done. In other words, here was an excellent opportunity for reassessing the emerging medical and scientific data and evolve, even at this late stage a programme for health services beginning with detoxification.

In keeping with everything that has happened in Bhopal, the committee muffed the opportunity. After 11 months of desultory functioning all it could come up with was a one-and-a-half page 'report' — the majority report. The committee asserted that NaTS therapy was 'efficacious' and it had been found to be useful in providing symptomatic relief. It concluded that "had the NaTS therpy been provided earlier a larger number of patients might have been benefitted." None of the other issues touched upon by court directive were even considered.

It was in these circumstances that the minority of two dissenting members, Dr Sadgopal and Dr. Das decided to undertake the stupendous task which the committee had opted out of. In doing so the report throws light on the disinterest of members about a matter of life and death concern to the people of Bhopal; it brings out the puzzling reluctance of the committee to call for information from the various institutions or even from the centres in which some of the members worked; and the marked lack of rigour in analysing the data placed before it. This committee it must be stressed was not of merely academic significance; it was constituted at a time when Bhopal's victims were gravely ill and many dying, to work out the best possible programme for detoxification. That it decided after 11 months to confine itself to one single recommendation, and even that on insufficient material is a shocking criticism of the, 'experts' who constituted the committee.

In contrast the minority report delves into a vast amount of data, obtainined with great difficulty. The report painstakingly documents the sequence of events in Bhopal — nothing short of an expose — which has led to the rapidly deteriorating health status

of the population. It once again raises questions which have been asked before but never been answered : Why was the ICMR so lackadaisical about implementing its early guidelines on detoxification ? Why was the state government health administration, especially certain sections of the Gandhi Medical College, so opposed to administering NaTS even when they could very well discern its subjective efficacy ? Even after the government apparently agreed to administer the antidote, why is it that only a miniscule proportion of the total population needing it has received it ? And most importantly, was the basis on which NaTS was prescribed and promoted by activists who took the experts — Dr Chandra's early study and ICMR's double-blind clinical trial — scientifically sound?

Even more significant however, is the report's reveletion that to this day there has been no effort to coordinate the various research projects being undertaken in Bhopal. For instance, although the ICMR listed 24 projects in Bhopal, it does not as yet seem to have made any attempt to collate the findings in order to evolve a broad toxicological perspective. This has meant that there is no cohorent understanding at present of the manner in which MIC has affected the population. The report points out that the possibility of systemic persistence of MIC or its metabolites in the victims and their role in the chronic phase have not upto now become a focus of attention. And yet there were enough data to indicate further investigations in this direction. What is even more puzzling is that three independent studies did in fact propose to focus attention on this matter : Prof Heeresh Chandra's early toxicological study; as early as May 1985 the ICMR postulated the possibility of chronic cyanide toxicity among the victims — the author of this was none other than Dr. S. Sriramachari; and in December 1986, the ICMR update stressed the need to study the "biological effects and metabolism of the toxic principals". And yet the minority members have not been able to obtain any information about these aspects.

In fact the ICMR appears to have been rather adept at compartmentalising its research — this despite having set up a Bhopal Gas Research Centre to ostensibly coordinate the work. For instance, the AIIMS team investigating thyroid activity in the affected population found evidence of persisting toxicity. Surprisingly however, although this too was an ICMR study, albeit not among the 24 listed as Bhopal studies. Not only were the findings disregarded, the project itself was terminated! Similarly, Dr NP Mishra, one of the loudest members of the anti-thiosulphate lobby in Bhopal, was forced to recognise in his October 1987 report for the ICMR the continuing morbidity of his gas-affected patients who had been treated symptomatically. Even this failed to make an impact on the Council's understanding of the situation.

Equally difficult to understand is the fact that investigations on animals exposed to MIC conducted in institutions other than ICMR such as the Defence Research and Development Establishment in Gwalior were probably not even known to the medical researchers. As such they failed to influence the direction of research being conducted over all. The minority members have also failed to discover any material which attempts to integrate the findings of the clinical, toxicological, epidemiological and autopsy findings and analyse them in the perspective of the results of studies on the chemistry of the decomposing products in MIC tank 610.

Part of the reason is of course the shroud of secrecy which surrounds every investigation in Bhopal. The minority members themselves had to contend with this constantly, despite the Supreme Court directive that all information was to be made available to the committee. This raises disturbing questions on the necessity of this secrecy. What was it meant to achieve : to keep information from Union Carbide or was it in fact to keep information from being disseminated to the people ?

— P. P

Problems in Documenting EP Drugs Campaign

anant r s

THE two articles on high-dose EP combination published in *RJH* Vol II. no. 3 do not aim at giving an account of the movement to ban this hazardous drug-combination. But there are certain inadequate or inccurate statements about the same. This response is to correct the unintentional misleading impression created by these statements.

A few activists and journalists belonging to health and consumer groups had gathered in Pune in January, 1983 to discuss and chalk out an action-plan on mutually agreed issues. In this discussion it was decided to take up a campaign against high-dose EP combination. The technical, background material was then prepared by Mira Shiva and Satyamala of Voluntary Health Association of India. V.S. Mathur, Professor of Pharmacology at the post-Graduate Institute of Chandigarh, prepared a 'dear doctor' letter. This was circulated amongst different health, consumer, women's groups and signature-campaign was undertaken. We requested women's groups to include the demand for a ban on this combination, in the list of demands on the International Women's Day March 8 that year. We also managed to get articles published in news papers all over India on March 8 (which was incidentally a Sunday) arguing for a ban on this combination. This was followed up with representations to the concerned authorities.

The second source of determined opposition was in the form of petition in Supreme Court by Vincent Pannikulangara against the continued use of a number of hazardous drugs including high-dose EP combination. The Supreme Court ruling on this petition resulted in the public enquiry.

Thirdly, an article in the *Onlooker* published from Madras, claimed that Palaniappan from Madras has reported a very high incidence of congenital anomolies consequent to the administration of high-dose EP combination to pregnant women. There was a lot of uproar on this issue after this article. Questions were raised in the Parliament.

As a consequence of this determined opposition from different sectors, the Government requested the Indian Council of Medical Research to give its opinion about this issue once again. (Earlier, ICMR had said that there is no need to ban this product; only a warning be given along with the product that it should not be used in pregnancy.) We had argued that this warning, was not going to stop the misuse of this drug. Since there was no scientific indication whatsoever for the use of this combination, consumers would not be deprived of anything if this hazardous combination was banned. This second committee of ICMR also recommended its total ban. It is thus not correct to say that the use of high-dose EP combination "has created such havoc that the victims, i.e. some of the women, could not bear it any longer. Their protests led to the banning of the drug."

The relative success of the campaign on this issue in 1983 was one of the important factors responsible for the continuation of this networking that had taken shape around this issue. The All-India Drug Action Network, consisting of around a dozen health, and consumer groups, was born and continued to follow-up the demand for a ban on high-dose EP combination.

In the public hearings on high dose EP combination, member-organisations of All-India Drug Action Network have played a significant role. The method of publishing the notice about the public hearings in an inconspicuous manner and not informing the concerned action groups was severely criticised. So also the reported decision of the Drug Controller to stop the hearings after the Calcutta hearing. Fraternal organizations outside AIDAN, like FMRAI and Health Service Association of West Bengal also put up a lot of pressure on this issue. As a result of these efforts from different groups, the Drugs Controller had to decide to hold hearings in Calcutta and Bombay and had to send invitation-notices about these public hearings in Calcutta and Bombay to all the concerned groups. Mira Shiva (VHAI), Satyamala (MFC), Vishwas Rane (Arogya Dakshata Mandal), Amit Sen Gupta (Delhi Science Forum) gave a valiant fight at the Delhi hearing even though the pro-EP forte lobby was in the majority, had a few prestigious gynaecologists on their side. All these organisations are members of AIDAN. In the Bombay-hearing also ACASH, ADM, MFC, LOCOST—(all members of AIDAN) along with other similar groups presented a solid technical case against high dose E.P. combination, whereas various women's groups presented a social critique of the continued use of this combination against the interests of women. Amitav Guha's article, unintentionally glosses over the role of AIDAN in this movement.

The movement against high dose EP combination thus does not follow a classic pattern. It was not initiated by any women's group, nor did the women's group consistently follow up this issue, or took a lead in it. A lawyer (Pannikulangara), a journalist of *Onlooker*, a few committed health-activists from certain health-action groups (some of which are incidentally foreign-funded) played at least as important a role as women's groups or the trade union FMRAI, alongwith many others, did AIDAN remained the

'Cut System' Dilemmas

murlidhar

forum which helped to pursue the matter and helped to co-ordinate the lobbying.

The above clarification is not at all meant to be a criticism of women's groups but to communicate as to how things took shape in reality. It indicates that sometimes initiatives are taken, events occur in such issues in health in a rather unexpected manner. What is the significance of this unorthodox picture? What are the lessons to be drawn? I hope, that there would be some discussion in *RJH* on this topic.

Today a friend of mine, a consultant earned Rs. 100/ -- out of which he gave Rs. 60 to the ever willing hands of the local GP. This patient had come to him with a diaganosis of 'chronic' appendicitis. The G P instructed my friend to get a host of investigations from a specific pathologist and a radiologist who in turn give their respective cuts to the GP. All his medical teaching was of no avail as he unnecessarily subjected the patient to a host of investigations and unnecessarily operated on a patient who actually had a mild attack of Amoebic typhlitis.

It is said that nearly 80 per cent of private health practice is part of this nexus of commission and cuts between the GP and the consultant. They go to any lengths to earn their bread and butter and probably, jam. They may be part of the so called 'Arab practice' or the 'Kidney transplant nexus'. They admit patients in their ICCU's with a (mis) diagnosis of an infarct. They manage seriously ill patients till they become critical before sending the patient to a general hospital. They even have nexus with the Medical representatives who give cuts for prescribing a particular drug albeit spurious or banned like EP forte for example.

The health services of our country like most others like pharmaceutics is an industry in itself. It is profit-oriented. All the state run health services are poorly equipped to deal with the illnesses of 700 million people, the government is not interested in providig better facilities, because of the poor cost-to-profit ratio. The drug industry is the second most profitable industry in the world after the arms industry. Hence there is flooding of spurious, banned and bannable drugs in the market.

Where does a doctor figure in the above maze of profit-oriented industries?

On one hand is what we have learnt and understood for the past 26 years, on the other is the pull exerted by the profit-oriented industry. Most of us do not have a capital to rely on, hence, tend to get pulled to the latter side. If we resist, then there is a theoretical possibility of falling into the abyss between the two philosophies.

We have to choose whether we are going to practice rational medicine or whether we are going to join the rat race. The latter choice is irreversible. If we choose the former, we can set an example for others to follow and hope that the profit oriented economy of drug and health services will surely meet its hour of crisis when the average patient says in unison "I cannot stand it any longer". Can we stand the test of time?

The irrational 'cut' practice was not so prevalent say 50 years back. At that time our elders insisted that honest, and ethical medical practice is important and unethical practice is to be shunned. Now, the same elders and colleagues say that if one wants to just about make both ends meet, he should practice irrationally. Why has it changed so drastically?

Even at that time there were two types of health services, namely 1) private practice and 2) the state run hospitals supposedly working selflessly. Over the last 50 years, a lot of money was poured in to set up large-scale drug industries or extensive diagnostic centres. The above works only to increase the invested money. The owners do not think about the average consumer but only in the amount of profits they get.

The health budget of the state of Maharashtra is one of the highest. It is believed that the effects of the increased budget would 'trickle' to the bottom increasing the health status of the millions of exploited in the city. Actually it appears as if that it has had no effect at all. Otherwise nearly 100 infants would not be dying of every 1000 live births or 50,000 people would not die of TB every year or thousands would not become blind every year due to lack of Vitamin A!

Let's now look at private practice in this respect. The private doctor is no longer an independent healer. He is part of the system whose owners are interested in the profitability of their drug enterprise or the diagnostic or therapeutic equipments. He is controlled by the very system that promotes the increase of capital at the hands of few industry owners. He no longer practices rational medicine. His idealism remained purely theoritical that is taught in the sheltered class -room of a medical college. He becomes a commodity that can be bought and sold by money.

Is it possible to fight this manace? If so will we get support from colleagues or others who are passing through the same process in other fields?

(Continued from page 27)

tolerated, then the health sector will reflect this pattern, with health for a few and not for all. To bring about a revolution in health, it becomes necessary to bring about a revolution in society. The experience of socialist-oriented societies shows that once they have changed the pattern of the distribution of resources within the society, they have been able to change the pattern of health care, making access more equitable. Apart from socialist countries, some social democratic nations with a long history of participation by the masses have also provided adequate health facilities to their people and the resulting improvement in their health status is quite enviable. Thus, one cannot expect significant improvement in the health sector in Pakistan without substantial participation of the masses in the workings of society, and without substantial changes in the power structure as it exists today.

So, where does the well-meaning People's Health Scheme fit into all this? The People's Party is a populist party which means that it cannot and will not change the basic economic and political power structure as it exists in the country today. Thus, one cannot expect that it will drastically change either the health system or substantially increase the accessibility of health services. It is true that under the Bhutto regime, the expenditure on health care was much greater than it has been since 1977. But, caught up in a pseudo socialist populist trap, the policies followed looked good only on paper. The eight medical colleges built in the country were created to appease the noisy middle classes. Had the government really been sincere it would have built rural health centres and basic health units instead of these great buildings called medical colleges. (For the cost of one medical college, 251 rural health centres or 556 basic health units could be built which would serve 5.56 million people - all of whom live in rural areas!).

Thus, the People's Health Scheme is a step in the right direction, and one can assume that some changes on the margin will indeed be made. However, meaningful radical change in the health sector, which would truly and honestly serve the people, will only come about once the existing social, political and, most importantly, economic relations are broken.

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Doctors and Torture

TORTURE is condemned universally as inhuman and as a calculatedly cruel practice. As such it should not find any place in any civilised society. Yet its widespread use is a truth that cannot be denied. To a greater or lesser extent it is resorted to in all countries. Why is this so? Why do countries which apparently place a high value on human rights routinely practise and condone physical and mental abuse of its opponents both in times of war and in peace?

Torture has been recorded in history since the ancient times and there have been references to torture in the 12th and 13th centuries, and even earlier. The Tudor and Stuart monarchs made frequent use of torture. But it was during the religious and political struggles of the 16th and 17th centuries in European countries that there was more open discussion of the subject. Indian history also is replete with references of torture of political prisoners.

It was in the 18th century that a movement against this cruel inhuman practice was initiated with the hope that by the end of the 19th century this practice would be abolished altogether. But the reality of concentration camps in Germany under Nazi rule, with their largescale use of torture wiped off this optimistic belief. However, it was in the aftermath of the war and the end of Nazi rule that serious attempts were first made to set out norms of conduct for medical people participating in torture.

Torture is among the most reprehensible aspects of state repression. Unlike other forms of repression, it can be carried out in private and in such a manner that none but those against whom it is used come to know of it. So it can be practised with impunity within smiling democracies professing to be 'open' societies ensuring freedom of speech, expression etc. to its citizens.

Torture is used to suppress dissent against the state and its ideology in various ways. It is used extensively to extract information—and this use is often protrayed as being justified in order to maintain 'law and order'. But more importantly, it is used to strike terror in the hearts of those who oppose it. A torture victim becomes a warning to others who may follow his/her path for much the same reason that feudal barabaric societies displayed severed heads or conducted public hangings.

The Indian state has consistently and widely used torture to quell rebellion and protest whether it is to supress movements of minorities for autonomy or those which pose an ideological challenge to the state. In Telengana in the 40s and Naxalbari in the 60s and 70s and Bihar, Punjab and Andhra Pradesh in the 80s the state's police have systematically and routinely used torture on political prisoners so much so that they have perfected methods which cause pain and suffering to the individual but leave no mark which can be displayed to monitoring authorities, such as they are. And in all this at some level or other—whether in diagnosing and treating a victim of torture or in issuing death certificates of those who have succumbed to it or in many other numerous small ways—is involved a health worker most often a medical professional, who ironically enough is pledged to preserve life and reduce suffering.

Here there are two aspects which must be touched upon. Usually torture in most codes is defined to mean the abuse of person in the custody of the authority. In a larger sense and increasingly, it includes the physical and mental abuse meted out to the friends, relatives and others close to the victim. Again the evidence of torture becomes valid only with the involvement of the medical profession. Secondly, sexual abuse and assault on women held in custody or held for 'questioning' is becoming increasingly frequent. And in most cases, it is medical evidence which will help in bringing the victimisers to book. The medical profession thus plays a crucial role in protecting human rights.

The United Nations, in 1975, in its Declaration, has defined torture as: "Torture means any act by which severe pain or suffering, whether physical or mental, is intentially inflicted by or at the instigation of a public official on a person for such purposes as obtaining from or a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or other persons. It does not include pain or suffering arising only from, inherent in or incedental to, lawful sanctions to the extent consistent with the Standard Minimum Rules for the Treatment of Prisoners. Torture constitues an aggravated and deliberate form of cruel, inhuman or degrading treatment or punishment." (see *Health and Human Rights*, ICHP/cinpros 1986, p 25). As Paul Sieghart states (p 95) the "prohibition against torture contains no limitations or exceptions of any kind and *allows no derogation in any circumstances—not even in times of war or public emergency treating the life of the Nation*" (Emphasis added).

Doctors As Victimisers and As Victims

It is an irony that the "protectors of law and order"—the police themselves employ the method of torture which is so universally condemned but what is unthinkable is the involvement of doctors (actively or passively) in torture, particularly when they happen to be police, prison or military doctors. The conflict between the ethical positions of the prison doctors and national laws are real and superficially bewildering but certainly not unresolvable

As Dr. Wyner of the World Medical Association clarifies "that if a certain legislation is criminal and contrary to ethics, the doctor has the deontological duty to ignore it and in some cases, even oppose it when practicing his profession". It is thus gratifying to learn and in Switzerland, the prison doctors and subordinate medical authorities alone are responsible for the prisoners' health and thus find it easy to maintain the patient-doctor relationship. Such a trend must spread to other countries as well.

So far as the ethical codes on the subject are concerned, there need be no ambiguity in the mind of the medical practioner. The UN Declarations and codes relating to Principles of Medical Ethics, the Declaration on the Protection of All Persons from Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment and (iii) Standard Minimum Rules for the treatment of Prisoners and related recommendations are amply clear and concise to permit any grey areas. Furthermore, the statements by various orofessional associations viz. that of (i) physicians, (ii) psychiatrists, (iii) nurses and (iv) psychologists, also leave no stone unturned in respect of the ethical positions. [Elsewhere in the issue we carry the full text of some of there codes and statements]

Even so, there are reports revealing medical practioners attending the interrogation of punishment centres for examing the detainees to certify on their health and later administering treatment for the victims' injuries. Some of them are even reported to be active in torture. How else could one explain some of the more modern and sophisticated methods of torture which could not have been devised without the active participation of experts (forensic) having a high degree of knowledge in the area? To the extent that many of its members contribute to torture, the whole medical fraternity must also share his guilt and it is for the respective medical councils to pull up its members. Medical fraternity must do all that is in its collective power towards eliminating this obscene, cruel, inhuman practice that is internationally outlawed.

The doctor compounding or assisting torture discarding the ethical norms is obviously only one facet of the situation existing today, but consider the scene where (and this is known to take place more after in some countries under some dictatorial regimes) the doctor has had to pay heavy penalties including his life for having listened to his consciense and abiding with ethical codes laid down. Often a doctor is penalised for helping the victim of state repression or for supporting movements for justice. One such victim of police brutality was Dr. Ramanadhan who was shot dead the state police in September 3, 1985. We publish in this issue a short biographical sketch of the doctor-activist. Undoubtedly, health workers who use their professional skills to help those who protest against the state are themselves vulnerable. Particularly under the dictitorial regimes the reality is such that people's protest against such actions cannot be expected to operate. International pressures need to be applied and the Human Rights wing of United Nations have a pertinent role in this.

What about the repurcussions of torture on physical and mental health of the tortured? On the family? And the responsibilities of medical and social scientists in this matter? It is clearly imminent that torture would both physically and more importantly mentally wreck the victims' and ruin them and their families but sadly there are not enough studies on this important issue in our country [see the case of Archana Guha in this issue]. Such studies, if nothing else, could serve well towards eliminating the apathy towards this distantly occuring nonetheless sensitive issue. Surely it must be remembered that until empathy towards the tortured does not percolate through vast multitude of peoples, elimination of this inhuman practice will keep eluding us time and again.

Why have we chosen to highlight the issue of the role of the health worker in preserving human rights, especially in state torture? Firstly, because as we have seen, the medical profession plays a crucial role both in perpetrating torture but also in publicising its use and bringing the victimisers to book. In doing so, the health workers themselves become vulnerable to attack. It is therefore necessary that a strict code of conduct be implemented. Also, doctors who are placed in vulnerable situations must be ensured safety. In times of war, for instance, medical help is always ensured safe conduct. In times of peace too, it should be possible to safeguard the life of people who give medical aid.

Secondly, there has been an increasing incidence of police torture and inhumanity. With the growth of political awareness, mass movements are on the upswing. The state is bound to become more repressive and if this repression is to be effective while maintaining the facade of democratic functioning, it has to use such instruments which focus on the individual and are hidden from the public eye. There is a tendency to legitimise torture (say, by branding the victims as 'terrorists'). Again there is need to create an awareness of where, how and in what circumstances torture takes place and the role the health worker plays in this. It is also necessary to empower them with information on how they can be coerced into abetting torture and what they can do about it.

While we highlight some of the major issues in the field and how the international community of health workers have tackled it this is certainly not the last word on the subject. There is a particular lacuna about information on India. We hope the issue will generate discussion on the issue and lead to documentation of the Indian situation.

Anil Pilgaokar

Medicine at Risk

Doctor as Human Rights Abuser and Victim

Amnesty International

For over a decade now, the Amnesty International has been working to eradicate the use of torture. In this effort, it has paid special attention to the role of health workers in human rights violations as well as the violation of the human rights of people working in health.

[This paper was prepared by the International Secretariat of the Amnesty International and circulated as a background paper for the International Seminar on the same subject at Paris from January 19 to 21, 1989.]

IN 1978, Amnesty International convened an international meeting in Athens which brought together some 100 health professionals from 13 countries to discuss 'medical detection and effects of torture, the need for treatment, rehabilitation and compensation of torture victims, and other work of the medical profession against violations of human right'. Among the many conclusions and recommendations made by the participants, three themes were identified for continuing study and campaigning. Two of these particularly relevant to the subject of 'medicine at risk' were strategies for the prevention of torture, and the elaboration of medical ethics codes against torture [1].

Despite continued widespread human rights violations, there have been since 1978 a number of positive developments with regard to prevention of medical involvement in torture and two in particular might be mentioned here. The first was the adoption by the United Nations General Assembly on 18 December 1982 of the Principles of Medical Ethics Relevant to Health Professionals, Particularly Physicians, in the Protection of Prisoners from Torture and other Cruel, Inhuman or Degrading Treatment or Punishment. These, together with the World Medical Association's Declaration of Tokyo of 1975, offer the clearest ethical guidance to the health professional confronted with the problem of torture.

The second encouraging development has been the active public opposition of some medical and other associations to torture and their commitment to disciplining those health professionals who participate in it. However in the face of continuing human rights violations and despite committed work by human rights groups and professional bodies [2], a wider degree of engagement by health professionals in supporting colleagues at risk would make a significant contribution to the fight for human rights.

This paper reviews some of the issues implicit in the theme 'medicine at risk': that is, participation of health workers in human rights violations, the violation of the human rights of those working in health care; and the role of professional associations in dealing with these abuses.

Human Rights Standards

Human rights violations are contrary to the principles of all the healing disciplines. Ethical standards of a wide relationship of the practitioner and his or her client should be based, *inter alia*, on principles of beneficience and respect for the client's autonomy.

However, dealing with prisoners poses certain difficulties to medical and other personnel since prisoners have lost their freedom with concomitant restrictions on their autonomy; secondly, the health professional has obligations with regard to the detaining authority which they may see as threatening the concept of medical confidentality, in practice if not in principle. Nevertheless, the ethical standards have been clearly set out.

The World Medical Association, at its assembly in Tokyo in 1975 adopted a declaration which stated that it was prohibited for a doctor to "countenance, condone or participate in the practice of torture or other forms of cruel, inhuman or degrading procedures, whatever the offense of which the victim to such procedures is suspected, accused or guilty. . ." [3] The World Psychiatric Association, in its Declaration of Hawaii [1977] stated, *inter alia*, that "no procedure shall be performed nor treatment given against or independent of a patient's own will. . ." and "the psychiatrist must never use his professional possibilities to violate the dignity or human rights of any individual or group. . .".

Nurses' and psychologists' associations have also set out the responsibilities of these particular professions with regard to the care of those in detention.

An international code applying to all health professionals— The Principles of Medical Ethics—which embodied many of the elements of the Declaration of Tokyo, was adopted by the United Nations on December 18, 1982. This states categorically *inter alia* that it is a contravention of medical ethics for "health personnel, particularly physicians, to engage... sub acts [of] torture or other cruel inhuman or degrading treatment or punishment".

Unfortunately, in spite of the elaboration of these comprehensive standards, there is irrefutable evidence that in many countries professional expertise continues to contribute to human rights violations.

These breaches of professional ethics are manifested in a number of ways, including participation in the practice of torture. Direct involvement takes a number of forms:

Examination of prisoners before interrogation to ensure that the prisoner can survive torture or to find sen-

sitive foci for exploitation during torture.

To monitor the torture process: to stop the torture if it threatens the prisoner's survival or to resuscitate the victim where necessary.

To 'patch up' the victim after torture, possibility to undergo further sessions or to make the prisoner presentable for appearance in court or after release.

To provide the police or other authorities—under pressure or by free will—with false certificates stating that the prisoner is in good health or, in event of their death, certifying a false and misleading cause of death.

To advise the torturers or to directly use medical or psychological techniques during interrogation eg. giving sensitive information obtained during the interview or helping administer drugs [4].

Other abuses of medical expertise constituting infringements of medical ethics and human rights include:

Falsely certifying that an individual is seriously mentally ill in order to have them committed forcibly to a mental hospital so as to curtail their political activities.

Advising executioners of the progress of an execution to enable them to continue or to modify whatever technique they are using.

Using medical skills to mutilate an individual as a punishment or advising others in the application of such skills. [5]

Reasons for participation by health professionals in behaviour of the kind cited above can, for the most part, be the subject of speculation only; most of those who take part in torture do not set out their reasons for doing so [6]. However there is enough evidence to suggest that the motives [or rationalisations] include some of the following:

Fear of consequences of refusal or seeing open opposition to abuses as an impossibility for whatever reason. Doctors under military discipline may feel, like others, that they are under irresistable pressure to participate. In his study of the behaviour of Uruguayan physicians during the period of military rule [1973-1985], Bloche could identify only *one* health professional working with political prisoners who openly refused to collaborate in abuses [7].

Identification with the cause of the torturers and a belief that serious measures are justified by what are seen as serious threats to national security. The Chilean Physician Alfredo Jadresic cited a young doctor explaining his collaboration in military abuses at the Chile stadium after the 1973 coup in these terms: "What do you expect? We are at war."[8]

Defining the doctor's function as essentially a bureaucratic one. A female Uruguayan prisoner testified to pleading with a doctor to obey his physician's oath; she said that he replied: "I'm just doing my job" [9].

Inadequate understanding of professional ethics: for example, to see it as the health professional's job to minimise suffering resulting from torture or ill treatment through participation in the interrogation process.

The psychological mechanisms and ideological analysis by which doctors have justified participation in systematic human rights violations have been examined in depth by Lifton [10] with respect to doctors in Nazi Germany, and more briefly with respect to Uruguay during the military government of 1973 to 1985, by Bloche [11].

Lifton suggested the concept of "doubling"—ie. the creation of a second self who could participate in a lifestyle and professional conduct which might ordinarily be seen as in conflict with the individual's underlying moral and professional values. He refers to the 'technicalisation'of the medical role [dissociating the technical aspects of their function from the moral values associated with it] and a related psychological distancing. [Lifton points, for example, to doctors'participation in selection of vic tims for the gas chambers, noting that "by not quite seeing it, they could distance themselves from the very killing they were supervising; selections could be accepted as an established activity and seem less onerous than specially brutal tasks [such as medical collusion in torture to produce confessions]..."; pp. 199-200]. He suggests [p. 200] that such a view could also be interpreted that selection for killing was so onerous "that Nazi doctors called forth every possible mechanism to *avoid taking in psychologically what they were doing* [emphasis in original]. Other authors have dealt more generally which the motivation of tortures [12].

Participation in Violations of Human Rights

Evidence of the participation of health professionals in abuses of human rights is, unfortunately, readily found but perhaps not widely discussed or acknowledged. The report by the British Medical Association on doctors and torture, published in 1986, concluded that "the evidence given to the [BMA] leaves no room for doubt that doctors are involved in many parts of the world in the physical and psychological torture of prisoners."[13].

Documents published by AI both before and since the publication of the BMA report as well as reports from other medical associations [Chile, Uruguay, Turkey] and organisations [such at the American Association for the Advancement of Science] all confirm this phenomenon.

Abuses of psychiatry for political reasons have been documented in the USSR, Czechoslovakia, Romania and Yugoslavia, though the role of psychiatrists in these abuses probably varies from those who knowingly falsify a psychiatric diagnosis with the express purpose of colluding in the imprisonment of a political or social nonconformist to those whose role is more passive and who fail to protest at the failure of the legal system and their

own colleagues and superiors to protect individuals from such abuses. The motivations of psychiatrists involved in these practices probably include genuine belief in the diagnoses such as 'sluggish schizophrenia' [14] as well as conformist, bureaucratic and ideological reasons [15].

With regard to the death penalty, the role of the health professional is not well documented apart from the case of the USA where there has been a vigorous debate on the ethics of professional participation. Physicians have argued against [16] and for [17] physician involvement in execution by lethal injection, though the American Medical Association has made clear that any involvement would be unethical.

The American Psychiatric Association and the American Nurses Association have both ruled participation unethical though some psychiatrists still present evidence based on hypothetical questions relating to the defendant's "future dangerousness" in death penalty cases [where their evidence can be highly influential in securing the death penalty] despite the view of the APA that such testimony has no value as expert testimony since psychiatrists are no more accurate in such predictions than non-psychiatrists [18]. The ethics of such behaviour has yet to be ruled upon by the APA.

The involvement of health professionals in certain other human rights violations—flogging, amputations, prolonged solitary confinement—is more contentious since these abuses are provided for by a law in some countries and doctors' presence at their infliction may be specified in law. However, some individual doctors and some medical associations have nevertheless protested at such punishments being carried out in their country. For example, the Mauritanian Association of Doctors, Pharmacists and Dentists expressed 'deep concern' at the involvement of physicians in the punitive amputation carried out on three convicted thieves in September 1980. Another amputation took place in June 1981 and again a doctor was involved though it was reported that two amputations carried out in 1982 were executed by a medical auxiliary following refusal by doctors to assist. In Pakistan, both the Karachi branch of the Pakistan Medical Association and the Pakistan Junior Doctors, Association voiced their concern about flogging of political prisoners.

"The problem with torture", concludes the BMA report, "is not whether it is right or wrong. It is how to detect the subtle changes in relationships which lead to the doctor's acquiescence in torture." It continues:

> The experience of those who gave information to the [BMA] demonstrates that a refusal to compromise is effective in the early stages, firstly because the doctor himself is less likely to be compromised and secondly because the apparatus of the state is likely to be vulnerable to concerted public opposition. Once these early stages have been allowed to pass unchallenged, it may be too late to avoid serious abuse. [19]

Violation Against Health Professionals

Reasons for repressive measures being taken against health professionals include: (i) their real or perceived peaceful or violent political activities against the government; (ii) their activities in human rights groups; (iii) their professional activities or criticisms of government health policy; (iv) their giving treatment to injured armed opposition; (v) the perceived deterrence value of making an example of the health professional; (vi) accidental reasons [for example, being in the wrong place at the wrong time].

In many, perhaps most cases, persecution cannot be simply attributed to one unique reason. Doctors who are active in political opposition groups may also be engaged in human rights activities. Similarly, those who criticise health standards or government policy on health may also be seen as politically active, or involved in human rights action and so on. While the rights of doctors to participate in political activity must be protected in the same way that any citizen's political rights should be protected, the particular focus of this paper is the risk of doctors being victimised because of their professional or human rights activities.

The actions which precipitate repressive measures can, in some cases, be substantially attributed to human rights activities: the attacks are focussed and concern individuals whose prominence owes a lot to their position as a human rights activist.

In Colombia for example, two doctors active in the Committee for the Defence of Human Rights [CCDHM] were the victims of political killings in 1988. On 25 August 1988, Dr Hector Abad, aged 65, and Dr Leonardo Betancur, aged 41, were shot as they were leaving a service for the president of a teachers' union who had been killed that morning. Dr Abad, who was a former Dean of the Medical School, reported receiving death threats shortly before his murder.

In the USSR, those involved in the work of the unofficial Moscow Working Commission to Investigate the Use of Psychiatry for Political Purpose were detained in connection with their work in documenting the practice of internment of prisoners of conscience on spurious psychiatric grounds. Dr Leonard Ternovsky [b. 1933], a radiologist, was arrested on April 10, 1980 in Moscow and was charged under Article 190-1 of the RSFSR Criminal Code with "anti-Soviet slander". He was subsequently convicted and sentenced to three years' imprisonment. Other members of the Working Commission were also imprisoned in the period 1980 to 1981, culminating in the sentence of 12 years' imprisonment and internal exile for Dr Anatoly Koryagin, the psychiatric consultant to the Working Commission, following the publication in the British journal *The Lancet* [20] of a paper describing his experiences of the misuse of psychiatry for political purpose.

More widespread and indiscriminate repression occurred in Syria during the period 1978 to 1980, when there was pressure on the Syrian government from lawyers and other professionals to implement measures included lifting the State of Emergency in force since 1963. In early March 1980, meetings of dentists, pharmacists, engineers, lawyers, teachers and medical association representatives in different Syrian cities urged the introduction of reforms. On March 21 1980, a general conference of the Syrian Medical Association met in Damascus and passed a resolution which included the following demands:

> Re-affirmation of the principle of the citizens' rights to freedom of expression, thought and belief;
> Denunciation of any kind of violence, terror, sabotage and armed demonstration, whatever the reasons and justifications;
> Abolition of exceptional courts;
> Release or trial of all detainees

On March 31 1980 a one-day strike was called by lawyers in Damascus and this was supported by other branches of the Bar Association and by other professional associations including members of the Syrian Medical Association. Shortly after the strike, the national congress and regional assemblies of the Medical, Engineers and Bar Associations were dissolved by the Syrian Ministerial Cabinet. In the days that followed the dissolution, numerous lawyers, doctors and engineers were arrested and held without charge or trial. At least two doctors were later executed and some 100 doctors remain imprisoned still without charge or trial more than eight years after their arrest.

In Central America, a wide range of health professionals were subjected to intense repression in El Salvador and Guatemala in the period 1980-1982 and in a less intense way in subsequent years. Some of the victims of the torturers and 'death squads' were active government opponents but the institutionalised nature of the abuses and the impunity with which those perpetrating the human rights violations could act meant that those with little or no political engagement were also victimised.

In July 1980 a United States Public Health Association Commission visited El Salvador and reported an alarming pattern of military incursions into hospitals and abduction and murder directed against health personnel. Their report listed 23 health professionals who were killed or had disappeared in the period January to June 1980. Many were tortured before their murder.

In Guatemala, an equally disturbing pattern of attack directed against health workers was occurring. On April 23 1981, a 32-year-old doctor, Dr Otto Raul Letona, was shot 12 times in the torso by unidentified gunmen as he stood in the emergency ward of a hospital in Antigua, talking to a patient. Another 13 medical personnel were reported killed during the first half of 1981 alone.

In both El Salvador and Guatemala, being involved in providing health care to the rural poor appeared to be linked—in the view of the military—with subversion and opposition. The widespread and indiscriminate nature of the repression particularly in the early 1980s suggests that the definition of subversion was very loose and could be applied to anyone working to improve the situation of the peasants. In some cases, doctors *did* treat members of armed opposition groups or individuals who had sustained bullet wounds; occasionally doctors were detained for giving this help though it was much more common that a doctor suspected of 'aiding the opposition' would be dealt with extra-judicially.

Where torture, 'disappearance' and political killings are everyday realities [as in El Salvador and Guatemala during the period under consideration], the options for a health professional appear rather limited. Even if they wish to remain outside politics they are obliged to ensure that anyone with injuries should receive medical care and must, as a consequence, evaluate the best way to ensure the physical security of their patient. A number of cases have been documented where medical personnel have not reported patients with bullet wounds as required by law in circumstances where they could reasonably fear that reporting would lead to their patient being tortured or killed. This action in itself may make the doctor a target for human rights violations.

Since 1980, Amnesty International has issued medical appeals on behalf of health professionals in the following 30 countries: Afghanistan, Algeria, Argentina, Benin, Chile, Colombia, Cuba, Czechoslovakia, El Salvador, German Democratic Republic, Guatamala, Iran, Laos, Nepal, Paraguay, Republic of Korea, Romania, Singapore, Somalia, South Africa, Sri Lanka, Sudan, Taiwan, Turkey, Uganda, USSR, Uruguay, Vietnam, Yugoslavia, Zaire.

Role of Professional and other Associations

The central role of professional associations in assisting health personnel at risk of being pressured into collaborating in, or remaining silent about, human rights violations is alluded to in the last article of the WMA's Declaration of Tokyo. this states that:

> The [WMA] will support, and should encourage the international community, the national medical associations and fellow doctors, to support the doctor and his or her family in the face of threats or reprisals resulting from a refusal to condone the uses of torture or other forms of cruel, inhuman or degrading treatment.

Unfortunately, in many cases the associations themselves are under severe threat or acute repression. As noted above the Syrian Medical Association was dissolved after calling for human rights reforms in 1980; members of the Turkish Medical Association were prosecuted in 1986 for calling for an end to the death penalty in Turkey; the Chilean Medical Association was raided by security agents in 1986 at the time it was organising a meeting with international participation on the

theme of the role of medical associations in the protection of human rights.

However, it is striking that medical associations and other professional bodies in countries where abuses occur systematically have frequently *not* spoken out against them nor taken any apparent action against health professionals collaborating in torture, covering up deaths following ill-treatment or carrying out other unethical acts. Individuals doctors seeking support from their association or an obvious body to whom to complain, may interpret the silence of the professional association [sometimes correctly] as a disinterest in the issue or an unwillingness to speak out. If the professional leadership will not speak out, the pressure on individuals to remain silent is all that greater [21].

Recently, the Uruguayan Medical Association has been active in promoting the idea of an international medical forum for the hearing of evidence of medical abuses against human rights. This idea was recently supported at a meeting in Geneva in October 1988 of the International Council of Health Professionals. Some specialist groups of professionals have looked at ways of using their own expertise to counter human rights violations. For example, forensic scientists have contributed to the drafting of a protocol for the investment of deaths in detention or in order circumstances where a proper investigation of the cause of death should be instituted [22], and have participated in a number of investigations which have had the objective of clarifying the fate of persons whose deaths have been the subject of deliberate cover-ups.

While professional associations have a major role to play in disciplining their members who assist human rights violations and protecting members who are active in promoting human rights or who resist pressure to collaborate in torture, other bodies also have an important role. Human rights bodies can help translate and circulate information, endeavour to break down isolation and give support to both opponents and victims of torture and other bodies; they can press governments to fulfil their international treaty obligations; and they can offer international solidarity—something which has been remarked on as being of great support to those facing repressive governments.

Notes

[1] The third was the rehabilitation of torture victims. See *Violations of Human Rights: Torture and the Medical Profession.* Report of an Amnesty International Medical Semianr, Athens Mach 10-11 1987. AI Index: CAT 02/03/78.

[2] One of the associations which reversed a previous quiescent stand on human rights was the Colegio Medico de Chile which, after being permitted by the government to elect its own officers for the first time since 1972, embarked on a programme of medical ethical awareness, including the novel initiative of publishing, in November 1983, the WMA's Declaration of Tokyo as a paid advertisement in a major Santiago daily newspaper. This reflected the Colegio's belief in the importance of a public and professional understanding of ethical standards particularly with regard to torture. See, Stover E. *The Open Secret: Torture and the Medical Profession in Chile.* Wahsington: AAAS, 1987.

[3] For this and the codes cited below see Amnesty International. *Ethical Codes and Declarations Relevant to the Health Professions.* AI Index ACT 75/01/85, 1985.

[4] Information on these abuses can be found in a number of Amnesty International reports [see, for example, *Recent Torture Testimonies Implicating Doctors in Abuse of Medical Ethics in Chile.* AI Index AMR 22/29/84, May 31 1984] and also British Medical Association. *The Torture Report*, London: BMA, 1986; Stover E Nightingale. *The Breaking of Bodies and Minds.* New York: Freeman, 1985.

[5] In Sudan in 1983, a surgeon was included in a delegation sent to Saudi Arabia to learn amputation techniques; he later participated in the carrying out of the first amputations in Sudan. In Iran, a new amputation device was apparently designed in 1985 with the advice of medical personnel in Teheran.

[6] Occasionally some talk to the press; see a series of press articles about a Brazilian doctor who, in 1988, was disciplined by the Regional Medical Council of Rio de Janerio for assisting torture in the 1970s: *Istoe*, April 1, 8 and 15 1987.

[7] Bloche MG. *Uruguay's Military Physicians: Cogs in a System of State Terror.* Washington: AAAS, 1987.

[8] Jadresic A. 'Doctors and Torture: An Experience as a Prisoner'. *Journal of Medical Ethics*, 1980, 6:124-7.

[9] ['Yo solo cumplo con mi trabajo'.] *Testimonies on detention procedures, torture and prison conditions in Uruguay.* AI Index: AMR 52/18/79, June 25, 1979.

[10] Lifton RJ. *The Nazi Doctors.* London: Papermac, 1987.

[11] Bloche, *op cit.*

[12] Ruthven M. *Torture: the Grand Conspiracy.* London: Weidenfeld and Nicolson, 1978; Peters E. *Torture.* Oxford: Blackwell, 1985.

[13] BMA, *op cit.* p. 22.

[14] Reich W. 'The World of Soviet Psychiatry'. In Stover and Nighingale [eds], *op cit.*

[15] See Bloch S, Reddaway P. *Russia's Political Hospitals* London: Gollancz, 1977.

[16] Curran WJ, Casscells W. 'The Ethics of Medical Participation in Capital Punishment by Intravenous Drug Injection'. *New England Journal of Medicine*, 1980, *302*:226-30.

[17] Kevorkian J. Medicine, 'Ethics and Execution by Lethal Injection'. *Medicine and Law*, 1985, *4*:307-13.

[18] Cited in AI. *The death penalty in the [USA]: an issue for health professionals.* AI Index: AMR 51/40/86, 1986.

[19] BMA report, *op cit*, p. 22.

[20] Koryagin A. 'Unwilling patients'. The *Lancet*, 1981, *i*:821-4.

[21] Individual doctors can nevertheless speak out. The case of Dr Wendy Orr in South Africa is illuminating. On commencing work as a district surgeon in the Port Elizabeth area in 1985, she was struck by the number of prisoners alleging assault most of whom had injuries consistent with their allegations; she noted the complaints on the medical record cards, adding that these should be investigated. When her efforts to have some action taken on the persisting compalints of police brutality and torture had no effect she sought an urgent ruling from the Supreme Court restraining police from assaulting prisoners. An interim injuction was made. See Rayner M. *Turning a Blind Eye?* Washington: AAAS, 1987.

[22] *The Minnesota protocol: Preventing arbitrary killing through an adequate death investigation and autopsy.* A report of the Minnesota International Lawyers Human Rights Committee. Minneapolis, 1987.

Steve Biko and South African Medical Community

mary rayner

Steve Biko a leading exponent of Black Consciousness was detained and tortured to death in September 1977 by the South African police. The doctors who were called in to examine the detained, although aware of the fact that he had been tortured failed to raise a protest. Nor did they ensure that the detainee was adequately cared for when at last he was moved to a hospital. Their role raised a controversy in the professional bodies in South Africa which has subsequently had an impact on the attitude and the functioning of these bodies and of individual doctors on the medical profession's ethics regarding the torture of prisoners.

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EARLY on the morning of September 7, 1977, Dr. Ivor Lang, a Port Elizabeth district surgeon[1] was summoned by Col. Goosen, head of the security police in the Eastern Cape, to examine a detainee, Steve Biko. A leading exponent of Black Consciousness—the mixture of ideas and action which emerged in the early 1970s to unite black people against apartheid and white supremacy—Steve Biko had been held in detention under Section 6 of the Terrorism Act since August 19.[2] On the morning of September 6, the detainee had been taken from Walmer police station cells to security police headquarters for interrogation. At 7.30 a.m. on September 7, Major Snyman, leader of the day interrogation team, had reported to Col. Goosen that Biko was acting strangely and was refusing to react to questions. Col. Goosen asked Dr. Lang to examine the detainee for a suspected storke. In Goosen's presence Lang examined the detainee, who was lying on a mat, manacled to a metal grille in an office at security police headquarters.

During his examination, which was made at floor level, Dr. Lang found a laceration on the patient's upper lip which was edematous, a superficial bruise over the sternum at approximately the level of the second rib, a ring mark around each wrist, and edema of both hands, feet and ankles. The detainee also walked with an ataxic gait and spoke in a slurred manner. When asked by Col. Goosen for a medical certificate, Dr. Lang wrote:

> This is to certify that I have examined Steve Biko as a result of a request from Col. Goosen of the security police who complained that the above-mentioned would not speak. I have found no evidence of any abnormality or pathology on the patient.[3]

The next day Dr. Lang was summoned again. This time he examined the detainee in the company of his superior. Dr. Benjamin Tucker, the chief district surgeon for Port Elizabeth. The patient, still shackled to the grille, was lying on a mat now soaked with urine. During the examination, Dr. Tucker observed a possible extensor plantar reflecx in the patient,[4] who also complained of a pain in his head. Tucker and Lang contacted Dr. Hersch, a specialist in private practice, who agreed to examine Biko at Sydenham Prison Hospital. On September 9 Dr. Hersch performed a lumbar puncture, the results of which revealed bloodstaining in the cerebrospinal fluid. A neurosurgeon, Dr. Keeley, was consulted by phone. Although Keeley seemed not unduly worried regarding the patient's condition, he advised Dr. Lang to keep Biko under close observation.[5]

Apparently because the prison hospital had no observation facilities, Dr. Lang arranged for the patient to be transferred to the Walmar police station cells. As his final entry in the bed letter (medical record) at Sydenham Prison Hospital on September 10, Dr. Lang wrote: "No change in condition. Have informed him [Biko] that Dr. Hersch and myself find no pathology, that lumbar puncture was normal, and as a result I was returning him to the police cells."[6]

At the police station, the patient was left lying on a mat on the cement floor of the cell. Occasionally a police warden looked in on him. On the afternoor of September 11, Col. Goosen again called Dr. Tucker to the station. A police warden had found Biko collapsed, glassy-eyed, hyperventilating and frothing at the mouth. After a five-minute examination Dr. Tucker suggested that the patient be transferred to a provincial hospital in Port Elizabeth, but Col. Goosen refused to allow it. Tucker acquiesced in this and gave his permission to the police for the patient to be transferred by motor vehicle 750 miles to Pretoria.[7]

On the night of September 11 the semi-comatose patient, naked and handcuffed, was placed on some cell mats on the floor of a Land Rover and driven to Pretoria Central Prison. Biko was unaccompanied by any medical personnel during this long journey. No medical records on Biko's condition were sent with him. Several hours after his arrival at the prison Biko was examined by district surgeon Dr. A. Van Zyl. Without any information about the patient other than that he was refusing to eat, Dr. Van Zyl administered an intravenous drip and a vitamin injection. During the night of September 12, 1977, Steve Biko died lying on a floor mat and unattended.[8]

The Inquest

Three months later, spectator and reporters crowded daily into the large and ornate Old Synagogue building in Pretoria to hear the police and the doctors give evidence during the inquest into the death of Steve Biko. The proceedings attracted wide attention in South Africa and abroad, partly because of Steve Biko's political stature and also because of the notoriety gained by the police during the past year's student uprisings.

During the two weeks of evidence and intense cross-examination, the police witnesses were unable to explain the physical and mental deterioration Steve Biko underwent between the morning of September 6 when he entered the interrogation room and the morning of September 7 when he was first seen by a doctor. Their difficulty in providing a convincing explanation was dramatised when the counsel for Biko's family revealed in court a copy of a telex sent by Col. Goosen to police headquarters, in which he referred to an injury "which was inflicted on Mr. Biko at 0700 hours on September 7 after which he refused to speak".[9] The inquest magistrate, nonetheless, concluded that the likely cause of death was:

> Head injury with associated extensive brain injury, followed by contusion of the blood circulation, disseminated intravascular coagulation as well as renal failure with uraemia. The head injury was probably sustained during the morning of Wednesday, September 7, 1977, when the deceased was involved in a scuffle with member of the Security Branch of the South African Police at Port Elizabeth. Date of Death: September 12, 1977. The available evidence does not prove that the death was brought about by any act or omission involving or amounting to an offense on the part of any person.[10]

If the magistrate failed to use his power under the Inquest Act to draw conclusions concerning the culpability of the police, he did make an implicit judgment on the conduct of the medical practitioners who had attended to Steve Biko during the last week of his life. At the close of the inquest, the magistrate sent a portion of the inquest record containing the evidence of Drs. Lang, Tucker, and Hersch to the South African Medical and Dental Council. In so doing, the magistrate was acting in terms of Section 45 of the Medical, Dental, and Supplementary Health Service Professions Act of 1974, which provides that:

> Whenever in the course of any proceedings before any court of law it appears to the court that there is *prima facie* proof of improper or disgraceful conduct on the part of a registered person, or of conduct which, when regard is had to such person's profession, is improper or disgraceful, the court shall direct that a copy of the record of such proceedings, or such portion thereof as is material to the issue shall be transmitted to the South African Medical and Dental Council.[11]

During the inquest, the magistrate had received the advice and assistance of professors I. Gordon and J. A. Olivier, both pathologists of high reputation. Professor Gordon later stated that "at no time was there any doubt whatsoever in the mind of the presiding Judicial Officer or the two Medical Assessors, of whom I was one, that in terms of the Medical, Dental, and Health Professions Act...there was a *prima facie* case [of professional misconduct] against Dr. Lang and Dr. Tucker..."[12]

The results of the post mortem examination conducted by the Chief State Pathologist, Dr. J. O. Loubser, and the general autopsy performed by a neuropathologist, Professor N. S. F. Proctor, in the presence of two other leading pathologists including Dr. Jonathan Gluckman, were unequivocal in establishing that the cause of death was head injuries.[13] The inquest magistrate found that the injury which led to the patient's death was probably inflicted just prior to Dr. Lang's first visit at 9.30 a.m. on September 7, 1977. Photographs of the patient taken after his death clearly and unmistanably revealed a large scab on the patient's forehead.

All of this notwithstanding, Dr. Lang failed, apparently, to seen the injury on the forehead on the occasion of his first and subsequent examinations, according to a group of private South African doctors who submitted complaints to the South African Medical and Dental Council. Dr. Lang, they claimed, failed to attach any significance to the lip injury, or to other bruises and visible symptoms which Dr. Lang admitted in court having noticed. He failed to ask the patient for his account of how these injuries were sustained. He did not prescribe any treatment, carry out any routine blood or urine analysis tests, or take the patient's temperature at any stage. He did not recommend to the police that Biko should not be left lying on the floor or urine-soaked bedding. He failed to keep the patient under medical observation following Biko's transfer from Sydenham Prison Hospital to the Walmer police station. He did not keep Hersch and Keeley fully informed about the patient's condition or of actions taken which may have affected his condition. He failed to insist upon proper hospitalisation, or to oppose Dr. Tucker's acquiescence in the plan to send the patient to Pretoria. And only Steve Biko died did Dr Lang make any notes or reports of his findings.[14]

When counsel Sydney Kentridge pressed Dr. Lang during the inquest to explain his behaviour towards the patient, Lang stated that he believed the detainee was deliberately feigning illness. Col. Goosen had informed Lang that Biko had studied medicine for four years and that Biko had exhibited 'similar symptoms' during his previous period of detention. Lang claimed that Col. Goosen's comments had influenced his opinion. When questioned about his failure to ask Biko for his account of the lip injury and chest bruises, Lang stated that he had assumed they were sustained while the poilice were attempting to restrain the detainee, who, according to Col. Goosen, had gone into a rage on the morning of

September 7 and had attempted to assault an officer with a chair.[15]

On the issue of proper hospitalisation, Dr. Lang told the court that neither he nor Dr. Tucker had any option but to acquiesce in security police demands. Dr. Lang stated that he had the 'impression' that Mr. Biko could not be transferred to a non-prison hospital because he was regarded as "a security risk." Dr. Lang buttressed his defence by claiming that "we [district surgeons] are restricted in the sense that we cannot tell them where we wanted a detainee... You cannot buck the security branch."[16]

The effect of this particular line of defense was vitiated when Dr. Lang later admitted to the court that he had not really pressed the issue of hospitalisation with Col. Goosen. Goosen, Dr. Lang said, could have interpreted his reference to hospitalisation as necessary for diagnostic rather than treatment purposes. When asked if he at any stage suggested to Goosen that Biko was a sick man in need of treatment in a hospital, Dr. Lang acknowledged: "No, I did not."[17]

The two most egregious instances of questionable behaviour raised against Dr. Lang during the inquest concerned his medical certificate and his final entry in the bed letter. Col Goosen told the court that his request for a medical certificate on September 7 was 'plain logic'. Dr. Lang's certificate was, he added, completely satisfactory for his purposes. In the certificate. Dr. Lang had recorded as the reason for holding the medical examination that Biko "would not speak". Yet, in his later report to the pathologist conducting the post mortem, Dr. Lang wrote: "The detainee had refused water and food and displayed a weakness of all four limbs and it was feared that he had suffered a stroke." But, when asked to explain the discrepancy between these two statements, Dr. Lang could only reply: "I cannot explain it. It is inexplicable."[18]

In the second part of Dr. Lang's certificate of September 7, he noted that he had found no evidence of any abnormality or pathology. Dr. Lang admitted that this claim was "highly inaccurate" as he had found evidence of bruising, a lip injury, and edematous swelling of the hands, feet and ankles. Counsel Sydney Kentridge then asked Dr. Lang if it hadn't occurred to him that, "if, at some later stage, Biko might appear in court and complain about the way he was treated while in security police custody, [his] medical certificate would be a most important piece of evidence"? The doctor agreed that it would be but added that the possibility had not occurred to him on the morning of September 7.[19]

Dr. Lang had similar difficulty in explaining the contents of the entry in the Sydenham Prison Hospital bed letter, dated 10 September. He admitted that the statement regarding the lack of evidence of pathology was false. he knew that the cerebrospinal fluid was blood-stained, and that Dr. Hersch had reconfirmed the extensor plantar response. Nevertheless, Dr. Lang argued that the misstatement arose from the inadvertent omission of the word "gross" infron of "pathology".[20]

In his testimony, Dr. Tucker, the chief district surgeon in Port Elizabeth, attempted to explain his behaviour towards the patient, both claiming that he had accepted Col. Goosen's theory of feigned illness and by alluding to constraints affecting district surgeons' activities in relation to political detainees. At one point Professor Gorden pressed Dr. Tucker to explain why he did not tell Col. Goosen that he would disclaim all responsibility as a doctor if Biko was not taken to a proper hospital. Dr. Tucker replied that he did not consider the patient's condition as serious, as "there was still this question of a possible shamming on his [Biko's] part." He did concede, however, that no one could feign an extensor plantar reflex or red blood cells in the cerebrospinal fluid. he also accepted that, in terms of the Hippocratic Oath, the interests of his patients should always be paramount. But in this instance, Tucker admitted, as had Dr. Lang, that they were subordinated to the interests of security. "I didn't know," he said, "that in this particular situation one

Excert From the Inquest

Kentridge: Why didn't you stand up for the interests of your (Counsel for patient? Biko family)

Lang: I didn't know that in this particular situation one could override the decisions made by a responsible police officer.

Gordon: Why didn't you say that unless Biko goes to hospital you would wipe your hands of it?

Lang: I did not think at that stage that Biko's condition would become so serious. There was still the question of a possible shamming.

Kentridge: Did you think the plantar reflex could be feigned?

Lang: No.

Kentridge: Did you think a man could feign red blood cels in his cerebral spinal fluid?

Lang: No

Kentridge: In terms of the Hippocratic Oath are not the interests of your patients paramount?

Lang: Yes.

Kentridge: But in this instance they wer subordinated to the interests of security?

Lang: Yes.

(Inquest into the death of Steve Biko, Proceedings, in Bernstein, *Biko*, p. 94).

could override the decisions made by a responsible police officer."[21]

On several occasions during the inquest porceedings, Dr. Tucker contradicted himself. Although stating at one point his belief that Biko may have been feigning illness. Tucker claimed elsewhere in his evidence that the though of head injury had occurred to him. yet he failed to ask the detainee the source of his lip injury or the police if Biko had received a blow on the head. Dr. Tucker initially denied that his reticence came from dealing with the security plice. When Kentridge pressed him on this issue, however, Tucker reponded. "I would say no, you don't [ask questions in that situation]." After a five minute court adjournment, Dr. Tucker, in resuming his evidence, retracted his statement. "Questions asked by the district surgeon," he said, "are not banned in the security offices." He further claimed that, "at all times I have always had all the co-operation necessary from the security police. When we require information and when we require things to be done, then they are done."[22]

If Dr. Tucker's assertion about the co-operativeness of the police was correct, then it threw on onus of responsibility for the fatal pretoria journey directly on to his shoulders. Tucker's evidence shows that he deferred without protest to Col. Goosen's refusal to allow the detainee local hospitalisation. Dr. Tucker consented to Goosen's alternative proposal tht the patient be transported to Pretoria by motor vehicle. The only aspect the arrangements he claimed to have insisted upon was the need for a soft mattress. Tucker stated later, however, theat he neither saw it as his responsibility to check the vehicle used nor reassure himself that there was infact a mattress, blankets, and a pillow for the patient. Furthermore, he did not consider it part of his responsibility to insist that Biko be accompanied by a medical attendent or his medical records.[23]

On the crucial matter of the state of Steve Biko's health the day before his death, Dr. Tucker had written that he found no positive sign of organic disease and that the patent's condition was satisfactory. Under questioning Tucker admitted that he had found the patient lying on the floor with forth at his mouth and hyperventilating. He had found the patient weak in the left arm and apathetic. He admitted that he knew of the extensor plantar reflex. Nevertheless, when challenged to admit that "in this situation no honest doctor could have advised that Biko's condition was satisfactory," Dr. Tucker persisted. "In the circumstances, [I] though it was," he said.[24]

In his final submission made to the court on behalf of the Biko family, Counsel Sydney Kentridge strongly criticised the indifference displayed by Drs. Lang and Tucker towards the patient. Their relationship to Col. Goosen, he charged, "was one of subservience bordering on collusion." And their behaviour carried a significance beyond the present case. For "the medical profession's general reputation has led couts in the past, whenever an issue arose as to whether a prisoner seen by a doctor had been assaulted or not, to place great if not absolute reliance on the district surgeon's findings." Kentridge submitted that in this case "the proved facts show that not only can the court not rely on the evidence of Drs. Ivor Lang and Benjamin Tucker, but that an analysis of the evidence show that they joined with the security police in a conspiracy of silence." The very best that could be said, he argued, was that "they turned a blind eye." Kentridge concluded that the doctors' neglect of the patient's interests in deference to the requirements of the security police "was a breach of their professional duty, which may have contributed to the final result."[25]

Excert From the Inquest

Kentridge : Why did you not ask the obvious question, whether the man received a bump on the head?
Tucker : I did not ask it and that is all I can say.
Prins (magistrate) : Did you ask Biko?
Tucker : No.
Kentridge : Was it not possible you were reluctant to embarrass Goosen?
Tucker : No.
Kentridge : Either from reading about it or from your own experience have you no knowledge that the police assault people in custody?
Tucker : I have. (Further answer inaudible).
Kentridge : But on that occasion you did not ask?
Tucker : No, I did not. Where persons are brought to me for examination my report is completed on a special form. This is all I am required to do. This history was given to Dr. Lang... The restraint [on the morning of 7 September] could have resulted in the damage.
Kentridge : You accept it as a fact, what Goosen told you?
Tucker : May I put it this way? If am called to see a patient and he has a cut onhis head, then I am interested in treating him and not in how he got the cut.

(Inquest into the death of Steve Biko, Proceedings, in Bernstein, *Biko*, p. 85)

Response of South African Medical Dental Councils

The South African Medical and Dentral Council (hereafter referred to as the Medical and Dental Council) is South Africa's principal regulatory body controlling the medical and dental professions. The thirty-four member

statutory body has the power, under the 1974 Medical, Dental, and Supplementary Health Service Professions Act, to license and control the trainings of the members of the medical and dental professions and to uphold ethical medical standards. The Medical and Dental Council is vested with quasi-judicial powers to regulate the conduct of the medical and dental professions, including the authority to institute an inquiry into any complaint, charge, or allegation of improper or disgraceful conduct against any person licensed as a practitioner by the council. The Medical and Dental Council has the power to impose penalties, including striking the person off the register of licensed practitioners.[26]

The 1974 Act does not define improper or disgraceful conduct. The Medical and Dental Council has the discretion to define such conduct, and, periodically, the council makes rules specifying the acts and omissions for which it may take disciplinary steps against a registered member of the medical or dental professions. For instance, in 1976, the year prior to Steve Biko's death, the Minister of Health approved, *inter alia*, a rule prohibiting a practitioner from issuing a medical certificate unless he or she is satisfied from personal observation that the facts are correctly stated therein, or has qualified the certificate with the words "as I am informed by the patient."[27] In a 1985 Supreme Court review of the powers and duties of the Medical and Dental Council, the presiding judge described the council as "truly a statutory *custos morum* of the medical profession, the guardian of the prestige, status, and dignity of the profession and the public interest, in so far as members of the public are affected by the conduct of members of the profession . . ."[28]

Despite its clearly crucial disciplinary role, the Medical and Dental Council was to prove wholly inadequate for the task before it. In January 1978 the council received from Magistrate Prins a copy of the inquest proceedings involving Lang and Tucker's evidence. At the same time, the Medical and Dental Council was set a formal "complaint" by Mr. Eugene Roelofse, ombudsman for the South African Council of Churches. Mr. Roelofse's complaint posed a series of questions regarding the ethical conduct of Drs. Lang and Tucker.[29] Though Mr. Roelofse did not formulate specific charges against the physicians, the Medical and Dentral Council's president treated the matter as a complaint within the meaning of the Act. He directed the council registrar to refer the complaint, with the portion of the inquest record, to the council's Medical Committee of Preliminary Inquiry (hereafter referred to as the inquiry committee).[30] He also directed the registrar to send copies of these documents to Drs. Lang and Tucker and to ask them for an explanation.

In response the state attorney, acting on behalf of Drs. Lang and Tucker, requested a postponement of the inquiry, pending the outcome of civil proceedings launched by members of the Biko family.[31] When the Medical and Dental Council's registrar insisted on an explanation from the doctors, the state attorney replied that the complaint lacked the specificity necessary to initiate action by the inquiry committee and that it was defective in certain respects. The two doctors then applied to the Supreme Court for a ruling to this effect. The presiding judge dismissed the doctor's application.[32]

On April 24, 1980 the five-member inquiry committee met to consider the inquest record and other materials. The inquiry committee resolved that the contents of the documents be noted and, in a highly unusual move, the committee released its findings to the press before the full council had met to consider the resolution. In the *South African Medical Journal* of May 17, 1989, the inquiry committee announced that it had found no *prima facie* evidence of improper or disgraceful conduct on the part of the practitioners and that it had resolved that no further action be taken in the matter. Professor Gordon, one of the medical assessors at the inquest, later described this premature public release of the inquiry committee's findings as unprecedented in his 25 years of service as a council member.[33]

The Medical and Dental Council met on June 17, 1980 to consider the inquiry committee's resolution. At the meeting two members, Professors Shapiro and Carlton, attempted to convince the council that it should not confirm the inquiry committee's resolution; that there was *prima facie* evidence of improper or disgraceful conduct on the part of Drs. Lang and Tucker; and that a second inquiry into their conduct should be held.[34] Their motion was put to the vote and defeated. The resolution of the inquiry committee was confirmed by a majority of eighteen votes to nine.[35]

The Medical and Dental Council's decision provoked an uproar in the medical community.[36] The medical faculties of the Universities of Cape Town and the Witwatersrand disassociated themselves from the position adopted by the council. The Board of the Witwatersrand Medical Faculty in Johannesburg unanimously adopted a resolution expressing their deep disquiet at the council's finding. The Witwatersrand faculty felt that there was sufficient *prima facie* evidence to warrant a disciplinary hearing, and warned that "the South African Medical and Dental Council might have called into question its own credibility as an objective and unbiased guardian of the high standards of the medical profession in South Africa." In addition the medical faculty expressed concern as "to the possible effects of the decision of the Medical Council on the future treatment of prisoners and detainees by the authorities." The faculty went on to endorse the Guidelines for Medical Doctors Concerning Detainees and Prisoners, adopted by the World Medical Association (WMA) in Tokyo in 1975.[37]

The Witwatersrand medical faculty noted in its resolution that the Medical and Dental Council, as the purported watch-dog of the ethics of the profession, had been zealous, even over-zealous, in the severity of the punishments meted out in the past for even minor infringements of medical ethics. Yet, in the present case, they found it difficult to accept "that the council [had] applied its collective mind to the problem of the Biko doctors in a purely objective and dispassionate way."[38]

Despite these protests and the indications that medical associations in other countries were beginning to review their ties with South African medical organisations, the Medical and Dentral Council announced in October 1980 that its dismissal of the complaints against the Biko doctors was final and irreversible.[39]

The Medical and Dental Council's controversial decision forced critics to turn to the Medical Association of South Africa (MASA), a non-statutory professional organisation whose membership is purely voluntary.[40] On June 18, 1980 Dr. Jonathan Gluckman, a pathologist who had attended the post mortem on Biko on behalf of the deceased's family and a member of MASA's Federal Council, presented the association's secretary general, Dr. C. Viljoen, with a letter signed by 38 association members. The signatories called for an inquiry to determine whether Dr. Benjamin Tucker ". . . is a fit and proper person to continue to be a member of this Association." (Dr. Lang was not a member of MASA.)[41]

In accordance with MASA's Articles of Association, Dr. Wiljeon referred the letter with copies of a portion of the inquest record to the Cape Midlands Branch of the association where Dr. Tucker held membership. Unlike the Medical and Dentral Council, MASA lacked wide powers of inquiry and punishment. Its powers of censure over its members were limited to that of expulsion, with the initiative for this lying at the branch level and not at the national level. In this instance, the Cape Midlands Branch notified the MASA's Federal Council two weeks later "that a charge of unethical conduct against Dr. Tucker could not be sustained" and advised that "the case now be closed."

The executive committee of MASA's Federal Council met in August 1980 and accepted this recommendation. The committee also resolved that the findings of the Medical and Dental Council and its inquiry committee "be noted." Even so, the Federal Council's executive committee did raise questions concerning the conformity of the medical care received by Biko with the WMA guidelines in the Declaration of Tokyo. The executive committee acknowledged that the lack of conformity probably contributed to the "subsequent unfortunate course of events." Nevertheless, the executive committee shifted the focus of its questioning away from the conduct of the doctors to the possibly restrictive effects of existing laws and regulations upon doctors operating within the prisons.[42]

Two additional resolutions adopted by the Federal Council's executive committee alluded to the growing domestic and international controversy surrounding the response of the medical establishment to the charges against the Biko doctors. The committee defended the 'integrity and bona fides' of the members of the Medical and Dental Council and its inquiry committee, and MASA's Cape Midlands Branch. They also expressed MASA's satisfaction that the decisions of these bodies "had in no way been subject to outside influence and that there had not been any attempt at a 'cover-up' with regard to the conduct of the practitioners concerned."

In contrast, the Federal Council's executive committee viewed the critics of these bodies as proceeding on the basis of flawed newspaper reports, "which were frequently incomplete, biased, or based on political rather than ethical or humane considerations." The executive committee concluded that if evidence of improper or disgraceful conduct could not be found by the Medical and Dental Council's inquiry committee, the members of the MASA executive committee "could not be expected to submit to pressure or to violate their own consciences by laying a charge simply to satisfy the demands being made."[43]

To members of the South African medical community anxious to investigate fully the conduct of the Biko doctors, it appeared that the medical establishment had closed ranks. This impression was strengthened by statements published in September 1980 in the *South African Medical Journal*, the official journal of MASA.[44] The journal contained a statement by the Federal Council's executive committee recapitulating the discussion and resolutions passed at its August meeting. The chairman of the Federal Council, Dr. J. N. de Klerk, pointed out in the journal that three separate medical bodes independently had reached the same conclusion, namely, "that in light of the evidence available to them, and taking into consideration the particular circumstances surrounding this whole matter, the doctors were not guilty of negligence or of improper or disgraceful conduct." For those colleagues who still disagreed with these findings, de Klerk had only cold comfort. "Manifestly," he concluded, "the [Medical and Dental] Council itself is not able to reopen the matter, while the ethical committees of the MASA are substantially in agreement with its findings."[45]

MASA's stance provoked a spate of resignations among its members most prominently that of Professor Stuart Saunders, then principal-designate of the University of Cape Town, and Professor Frances Ames, head of the Department of Neurology at the same university. In a 'letter to the editor' of the *South African Medical Journal*, Professor Saunders challenged MASA's Federal Council to state openly the implications of its position: namely, that medical doctors should acquiesce in decisions taken by the police and accept that there are considerations other

than the patient's welfare to be taken into account in treating a prisoner. Professor Gordon, in announcing his decision not to stand for re-election for the executive committee of the Federal Council after 25 years of service, characterised the actions of the Medical and Dental Council and the MASA executive committee in exculpating the doctors as "an act of impertinence and arrogance."[46]

The resignations and negative publicity eventually produced a response from MASA's Federal Council. Dr. Jonathan Gulckman persuaded it to form a committee to inquire into the ethical issues raised by the medical treatment of Biko. The Federal Council also agreed to approach the government on the matter of the medical treatment of prisoners, especially those detained under the security laws, and to establish a code of conduct for medical practitioners working under these circumstances.

In a statement to the press announcing these decisions, Dr. Gluckman expressed his personal distress at the position adopted by the Medical and Dental Council. He acknowledged, as a member of MASA's Federal Council, "that mistakes have been made by us in MASA in the handling of the Biko matter." Dr. Gluckman said that it was essential "in the public interest and in the interests of the reputation and the good standing of the medical profession as well as in the interests of the prisoners that these mistakes be rectified."[47]

The Ad Hoc Committee appointed to consider certain ethical issues (hereafter referred to as the ad hoc committee) reported to MASA in June 1981. Investigations by the ad hoc committee were limited by its lack of subpoena powers and the fact that Dr. Lang and Dr. Tucker did not participate in any of the committee's proceedings.[48] In addition, the police denied the ad hoc committee permission to examine the Walmer police station cells where Steve Biko had been held. The ad hoc committee's report, however, critically reviewed the available evidence concerning the doctors' conduct and openly disagreed with the findings of the Medical and Dental Council.[49]

The report of the ad hoc committee encouraged those doctors who were dissatisfied with the Medical and Dental Council's decisions. Five doctors subsequently lodged with the council a detailed series of charges and complaints concerning the conduct of Drs. Lang. Tucker, Hersch, and Keeley. Appended to the document was a list of sixteen cases, dating from 1974 through 1980, involving similar instances of improper or disgraceful conduct by medical practitioners, along with the sentences imposed by the council's disciplinary committees.[50] A month later, in March 1982, five other doctors, together with the Transvaal Medical Society (now the Health Workers' Association), a voluntary organisation of mostly black doctors and allied personnel, lodged a separate list of complaints against Dr. Lang and Tucker.[51] Both sets of complainants referred extensively to the full record of the inquest proceedings in detailing and motivating the charges against the doctors.

In March 1983 the Medical and Dental Council's inquiry committee met to consider the allegations. The inquiry committee resolved "that all material evidence which had been submitted in support of the present complaint had also been considered by the committee and the council previously, and that no new material evidence had emerged such as warranted the rescission of the council's previous resolution". Accordingly the inquiry committee resolved that no further action should be taken against the doctors. A month later the Medical and Dental Council confirmed this resolution, once again rejecting a motion proposed by Drs. Shapiro and Carlton to the contrary.[52]

Faced with this rebuff, the complainants were forced to seek Supreme Court review of the matter. They petitioned the Court to set aside the resolutions of the Medical and Dental Council and its inquiry committee, and to direct the council to hold a new inquiry into the allegations of improper or disgraceful conduct on the part of Drs. Lang and Tucker. The petitioners argued that it was in the public interest and in the interest of South Africa that the applicants' complaint be properly heard. "The international reputation... of medical practitioners within the Republic," they noted, "has been tarnished by the fact that the [council] had failed properly to get to grips with an inquiry into the conduct of the medical practitioners whose conduct is in issue."[53]

In January 1985 the Court ruled in the petitioners' favor. It found that the inquest proceedings did support the charges and complaints of the applicants, and that there was *prima facie* evidence of improper or disgraceful conduct on the part of Drs. Lang and Tucker. The presiding judge referred, *inter alia*, to Dr. Lang's false medical certificate which represented an apparent breach of one of the Medical and Dental Council's rules of ethics. The inquiry council and its inquiry committee, in concluding otherwise, had misdirected themselves. The Court also found that the applicants, as medical practitioners, did have *locus standi* to approach the Court, because the purpose of the 1974 Act governing the activities of the council was intended not only to protect the public vis-a-vis the medical profession but also the reputation of the medical profession itself.

The Court then issued an order repudiating the resolutions adopted by the Medical and Dental Council and its inquiry committee in 1983. It directed the inquiry committee to resolve "that the evidence furnished in support of the aforementioned complaints discloses *prima facie* evidence of improper or disgraceful conduct, or conduct which when regard is had to the respective professions of [Drs. Lang and Tucker] is improper or disgraceful." It further directed the council to establish a disciplinary com-

mittee to investigate the conduct of the doctors.[54]

After seven years of evading its statutory responsibilities, the Medical and Dental Council was now forced to hold disciplinary proceedings against the doctors. In July 1985 a disciplinary committee, chaired by the president of the council, held hearings for four days. The committee found Dr. Lang guilty of improper conduct on 5 counts in that it (1) had issued an incorrect medical certificate and a misleading letter; (2) had failed to examine the patient properly; (3) had failed to inquire into and ascertain the possibilities of a head injury; (4) had failed to obtain a proper medical history of the patient; and (5) had failed to observe him and keep proper notes. Dr. Lang, who intended to continue practicing for a further five years, was given a caution and a reprimand.

The disciplinary committee found Dr. Tucker guilty of improper and disgraceful conduct on 3 counts: (1) he had failed to object to the patient's transportation by a Land Rover to Pretoria; (2) he should have insisted upon transportation by ambulance with proper medical attendants and the patient's medical records; and (3) he failed to make a proper medical check before stating that the patient's central nervous system had shown changes between examinations. The committee suspended Dr. Tucker, who was due to retire shortly, for three months from the medical rolls, but recommended that the enactment of the penalty should be suspended for two years conditional on his not being found guilty by the council or any other contravention during this period.

MASA's secretary general Dr. Viljoen issued a statement welcoming the committee's judgment. Dr. Viljoen added that "as in the past the findings of the Medical and Dental Council were accepted by the MASA." The sentences, however, were strongly criticised by others as being "pathetically inadequate." Several months later, in October 1985, the council stripped Dr. Tucker of his medical qualifications.[55]

The failure of the Medical and Dental Council and MASA to respond quickly and appropriately to the allegations against the Biko doctors had resulted in a bitter international controversy concerning MASA's membership within the World Medical Association. In 1981 a number of national medical associations, including the British Medical Association, withdrew from the world body in protest over MASA's continuing membership. Throughout 1985, international pressure on the WMA, combined with a campaign inside South Africa by a broad range of medical and health groups, led the WMA to alter its plans to hold its next annual meeting in Cape Town.[56]

Amid this controversy over its international standing, MASA acknowledged that the "Biko case" had done irreparable harm to the South African medical profession. The association, however, maintains a defensive posture on the matter in its correspondence in professional journals, which has only deepened the growing polarisation within the South Africa medical community. During an interview in 1985, Professor Frances Ames, one of the petitioners in the Supreme Court case against the Medical and Dental Council, expressed her concern about "this polarisation amongst medical doctors." The formation of an alternative professional association, the National Medical and Dental Association (NAMDA), in 1982 concretely expressed the dissension within the medical community.[57]

During part of an exchange with MASA on ethical issues which was published in the *South African Journal of Human Rights*, Professor Trefor Jenkins, one of the applicants in the Supreme Court suit, urged MASA to admit that it had made errors of judgment in the Biko case. Professor Jenkins argued that doctors, like other members of the society, have been initimidated by the police and the repressive measures used to implement and maintain *apartheid*. It was his firm belief that "the Council (and to some extent the MASA) [had] allowed itself to be influenced by irrelevant considerations when discussing the case of the Biko doctors." The case was, he felt, "one of straightforward and relatively simple medical ethics but the two bodies in question [had] allowed political (and, perhaps, what they perceived to be state security) considerations to cloud the issue." No good would be served, he said, by MASA persisting in the view that it did all it possibly could to ensure that justice was done in dealing with the unprofessional and even disgraceful conduct of the doctors who cared for Biko." Professor Jenkins suggested that MASA intensify its efforts to restore the image of the profession to one in which all doctors could feel proud and in which the public could feel confidence again. In a situation of deepening conflict in the country, the medical profession, Professor Jenkins urged, must be prepared to censure unequivocally any doctor who fails to expose police brutality or torture, lest irreparable harm be done to the trust relationship existing between doctor and patient, and the practice of medicine become impossible.[58]

Notes

1 District surgeons and general practitioners employed by the Department of Health. Their responsibilities include the provision of medical care to prisoners under regulation 6 of the prison regulations promulgated in 1965 under Prisons Act 8 of 1959. About 26 localities in South Africa have full time district surgeons. Part-time district surgeons operate elsewhere. Interview with Mr. Filmalter, acting registrar of the South African Medical and Dental Council, by Eric Stover in Pretoria in December 1985; Gilbert Marcus, "Safeguarding the Health of Detainees," unpublished paper, Center for Applied Legal Studies, University of the Witwatersrand, April 1987, pp 6-9.

2 Biko had been detained on a number of occasions, including for a period of 137 days in 1975. He had also been subjected

to a five-year banning order. Concerning his life and political activities, see Hilda Bernstein, *No 46—Steve Biko* (London: International Defense and Aid Fund, 1978); Milard Arnold, ed, *Steve Biko, Black Consciousness in South Africa* (New York: Vintage Books, 1979); Gail M Gerhart, *Black Power in South Africa: The Evolution of an Ideology* (Berkeley: Unversity of California Press, 1978).

3 Quoted in Bernstein, *Biko*, pp 76-78; Complaint by the Transvaal Medical Society Against Doctors Ivor Lang and Benjamin tucker in terms of Section 41 of the Medical, Dental, and Supplementary Health Services Act, 1975, made to the South African Medical and Dental Council, March 18, 1982, pp 3-5.

4 An abnormal reflex after infancy characterised by extension of the great toe with fanning of the other toes on sharply stroking the lateral aspect of the sole, *Blackiston's Gould Medical Dictionary* (New York: McGraw-Hill, 1972), 3rd ed p 168.

5 Bernstein, *Biko*, pp 87-90; Complaint by Dr. Frances Ames and others involving allegation of improper or disgraceful conduct made to the South African Medical and Dental Council, February 17, 1982, pp 21-22, 31: Report to the Medical Association of South Africa by the Ad Hoc Committee appointed to consider certain ethical issues, June 1981, pp 3-4.

6 Complaint by Dr. Frances Ames and others, p 26.

7 Bernstein, *Biko*, pp 33, 90-96; Report to the Medical Association of South Africa, p 4; Lawrence Baxter, 'Doctors on Trial: Steve Biko, Medical Ethics and the Courts', *South African Journal on Human Rights*, Vol 1, Pt 2 (August 1985), p 139.

8 Bernstein, *Biko*, pp 62-63.

9 Report to the Association of Law Societies in South Africa by Sir David Napley, former president, British Law Society, in Bernstein, *Biko*, pp 137-147.

10 Quoted in Complaint by Dr. Frances Ames and others, p 2. Following the inquest verdict, the Attorney General declined to pursue criminal proceedings and the Minister of Justice announced that the appointment of a Police Board of Inquiry was not warranted. Baxter, 'Doctors On Trial', p 149.

11 *Veriava and Others v. President, South African Medical and Dental Council and Others*, 1985 2 (SA) 293 (TPD), p 297.

12 Letter addressed to the Natal Coastal Branch of the Medical Association of South Africa, quoted in Complaint by Dr. Frances Ames and others, Annexure C, p 3. (The letter was also reported in *The Cape Times*, November 26, 1989.) Professor Gordon supplied an affidavit to the same effect in a Supreme Court action in 1984 (discussed below).

13 Report by Dean Louis H. Pollack on behalf of the Lawyers' Committee for Civil Rights Under Law, in Arnold, ed, *Steve Biko*, pp 344-346.

14 Complaint by Dr. Frances Ames and others, pp 18-38; Complaint by the Transvaal Medical Society, p 2-13; Bernstein, *Biko*, pp 76-95, evidence of Dr. Lang.

15 Bernstein, *Biko*, pp 76-79, evidence of Dr. Lang.

16 Complaint by Dr. Frances Ames and others, p 23, evidence of Dr. Lang.

17 *Ibid*, pp 22, 24, evidence of Dr. Lang.

18 *Ibid*, pp 25-26, evidence of Col. Goosen; Bernstein, Biko, pp 76-78. evidence of Dr. Lang.

19 Bernstein, *Biko*, pp 76-78, evidence of Dr. Lang.

20 *Ibid*, p 88.

21 *Ibid*, pp 92-93, evidence of Dr. Tucker.

22 *Ibid*, pp 83-85; Complaint by Dr. Frances Ames and others, p 49.

23 Bernstein, *Biko*, pp 95-96; Complaint by Dr. Frances Ames and others, pp 40, 54-55, evidence of Dr. Tucker.

24 Complaint by the Transvaal Medical Society, pp 22-26; Bernstein, *Biko*, pp 92-93; Complaint by Dr. Frances Ames and others, pp 43-46, evidence of Dr. Tucker.

25 Counsel's submission on behalf of the Biko family, in Bernstein, *Biko*, pp 110-114.

26 Established in terms of Act No. 56 of 1974, the Medical and Dental Council's members include: i) The Secretary of Health; ii) Ten members appointed by the Minister of Health who has the power to overrule any of the council's decisions, iii) Nine designated members, including the Director of Hospital Services, five medical and dental practitioners from university faculties of medicine and dentistry and designated by the principles of those universities, and three persons designated by the College of Medicine of South Africa, the South African Nursing Council, and the South African Pharmacy Board; and iv) Fourteen members elected by medical practitioners and dentists.

27 South African *Government Notice* R2278 published in *Government Gazzettee* 5349 of December 3, 1976. Rule 25(2) prohibited the performance by medical practitioners and dentists of professional acts under impropre conditions and/or surroundings, except in an emergency.

28 *Veriava*, p 307.

29 Baxter, "Doctors in Trial," pp 140-141; *Veriava*, pp 297, 298.

30 The inquiry committee, created under Section 61(1)(a) of the 1974 Act, is appointed at the beginning of each year from the members of the Medical and Dental Council and is charged with the duty of conducting a preliminary inquiry into complaints.

31 The plaintiffs brought an action for R90,000 damages against the security police, Drs. Lang and Tucker, and the Ministers of Health and Police. In July the Biko family accepted an out-of-court settlement of R65,000 from the State. The Minister of Police denied that the settlement amountd to an admission of liability. Lawyers' Committee for Civil Rights under Law, *Deaths in Detention*, pp 67-68.

32 Judgment in *Tucker & Another v. South African Medical and Dental Council & Others*,, 1980(2) SA 207 (TPD), pp 298, 213; Baxter, "Doctors on Trial," p 151. Judgment was rendered in December 1979.

33 *The Cape Times*, November 26, 1980; *Veriava*, p 299.

34 Quoted in *Veriava*, p 299.

35 Professor Gordon withdrew from the proceedings because of his involvement in the inquest. A number of other council members were absent when the final vote was taken. *Veriava*, p 299; Baxter, "Doctors on Trial," p 142.

36 Interview with Professor Phillip Tobias by Eric Stover in Johannesburg on December 11, 1985.

37 Reported in *Nature*, Vol 286, No 5770 (July 1980), p 200; *The Lancet*, No 8205 (November 29, 1980), pp 1184-1185. See Appendix A for Declaration of Tokyo text.

38 Reported in *Nature* (July 17, 1989); Trefor Jenkins, "The MASA Letter: A Rejoinder, The Organised Medical Profession on Trial," *South African Journal on Human Rights*, Vol 2, Pt. 2 (July 1986), p 236; "Biko Saga: The Ethics of Suppression," in *Critical Health* (Johannesburg), No 3 (July 1980), p 48; *Survey of Race Relations 1980* (Johannesburg: SAIRA, 1981), pp 570-572. In contrast to its response to the charge against the Biko doctors, the Medical and Dental Council moved quickly to organise disciplinary proceedings against Dr. Aubrey Mokoape, after he had served six years in prison for contravening the 1967 Terrorism Act. According to Amnesty International, Dr. Mokoape was interrogated, beaten, and held in solitary confinement during his

detention in 1974. He was convicted of two counts under the Terrosim Act, after a long trial in which the State attempted to prove a link between the Black Consciousness movement and political violence. Not a single act of violence was proved against any of the defendants. Two years after his release from prison Dr. Mokoape was informed that the Council's Medical Committee of Preliminary Inquiry had resolved that there was a *prima facie* case of improper or disgraceful conduct against him. The charge against him, relating solely to his conviction under the 1967 Act, represented the first occasion in which the council used a political conviction as ground for a disciplinary inquiry. One of the applicants in the Supreme Court suit initiated in 1984 against the council and the Biko doctors. Dr. Yosuf Veriava, attended the initial council hearing which he later described as making the council appear to be "an extension of the South African repressive machinery." The council eventually dropped the case after Dr. Mokoape's lawyers challenged the proceedings on technical grounds. Amnesty International, *Political Imprisonment in South Africa*, pp 59-60; summons issued against Dr. Mokoape by Mr. N. M. Prinsloo, Council Registrar, November 6, 1984; *Sunday Express*, January 13, 1985; *Sunday Tribune*, January 13, 1985; interview with Dr. Jerry Coovadia by author in Washington, D.C. on June 23, 1987.

39 *The Argus* (Cape Town), October 1, 1980.

40 According to Dr. Stuart Saunders of the University of Cape Town, about 70 per cent of the country's medical doctors are members of MASA. Dr. Jonathan Gluckman put the membership of MASA at between 10,00 and 11,000. Interview with Dr. Stuart Saunders by Eric Stover in Cape Town on December 14, 1985; interview with Dr. Jonathan Gluckman by Eric Stover in Johannesburg on December 9, 1985. Of 16,815 medical doctors in South Africa in 1983, 15,251 were white, 60 2343 'colored', 1,255 were Indian, and 249 were African (Department of Manpower figures for April 1983, quoted in Dr. M. Ramphele, 'Health and Social Welfare in South Africa Today', unpublished paper presented at AAAS annual meeting, Philadelphia, May 25, 1986, p 6).

41 Baxter, 'Doctors on Trial', p 142; private correspondence, Dr. Viljoen to Prof. S. J. Saunders, November 27, 1980.

42 Private correspondence, Dr. Viljoen to Prof. S. J. Saunders, November 26, 1980; Report to the Medical Association of South Africa, 1981, pp 7-8; *South Arican Medical Journal* (September 13, 1980), p 433.

43 Statement by the executive committee of the Federal Council, MASA, regarding the conduct of the doctors responsible for the treatment of the late Mr. S. B. Biko, in *South African Medical Journal*, (September 13, 1980), p 433.

45 The chairman of MASA's Federal Council, Prof. J. N. de Klerk, described the *SAMJ* as the "official organ and mouthpiece of MASA" which "must reflect the Association's policies," in a letter to Professor Stuart Saunders, November 27, 1980.

45 *South African Medical Journal*, (September 13, 1980), pp 432-433.

46 Letter to the editor of the *South African Medical Journal*, (September 17, 1980). Professor Saunder's letter was neither published nor acknowledged by the editor, although it appeared in full, without author's permission, as an agenda document for the Federal Council meeting of November 12, 1980. Private correspondence, Prof. Saunders to chairman of the Federal Council of MASA, November 14, 1980. Complaint lodged by Dr. Frances Ames and others, Annexure C. Apparently the journal editors also refused to publish the Witwatersrand Medical School statement on the case. Interview with Prof. Phillip Tobias by Eric Stover in Johannesburg on December 11, 1985. In the interview, Prof. Tobias criticised the then leadership of MASA for "dragging its heels in subservience to the government."

47 Press statement by Dr. Jonathan Gluckman, November 19, 1980.

48 The authors of the ad hoc committee report claimed that the Deputy Director of Health Services forbade the doctors' involvement in the proceedings. The Assistant Secretary of Health Services, according to Prof. Saunders, argued "why should my district surgeons take up rap for the police." Interview with Professor Stuart Saunders by Eric Stover in Cape Town on December 14, 1985.

40 Report to the Medical Association of South Africa by the Ad Hoc Committee appointed to consider certain ethical issues, June 1981; Baxter, 'Doctors on Trial', p 142.

50 Complaint by Dr. Frances Ames and others (see note 39). The complainants were Dr. Frances Ames; Dr. Edward Barker, senior surgeon, University of Natal Medical School; Dr. Trefor Jenkins, head of the Department of Human Genetics at the University of the Witwatersrand; Dr. Leslie Robertson, a medical general practitioner; and Dr. Phillip Tobias, dean of the Faculty of Medicine at the University of the Witwatersrand. Baxter, 'Doctors on Trial,' p 142; *Veriava*, p 299.

51 Complaint by the Transvaal Medical Society and others (see note 37). The individual complainants were Dr. Dumisani Mzamane, head of the Renal Unit at Baragwanath Hospital; Dr. Yosuf Veriava, a senior physician at Coronation Hospital; Dr. Rasik Gopal, neurosurgical registrar at Baragwanath Hospital; Dr. T Wilson, a pediatrician; and Dr. E. Holland. *Veriava*, p 30.

52 Baxter, 'Doctors on Trial', p 143; *Veriava*, pp 301-303.

53 Court papers in *Veriava*; Baxter, 'Doctors on Trial', p 143.

54 *Veriava*, pp 311-318.

55 Baxter, 'Doctors on Trial', pp 150-151; *South African Medical Journal*, Vol 63 (August 3, 1985) p 131; *The Lancet*, No 8447 (July 20, 1985), p 136; *The New York Times*, July 6, 1985; *The New York Times*, October 17, 1985.

56 Baxter, 'Doctors on Trial', pp 150-151; *Survey of Race Relations 1985* (Johannesburg: SAIRR publication, 1986), pp 454-455; *The Lancet*, No 8462 (November 2, 1985), pp 1000-1001; *The Lancet*, No 8424 (February 9, 1985), pp 342-343; *Canadian Medical Association Journal*, Vol 130 (June 15, 1985), pp 1623-1624; Memorandum submitted to the World Medical Association by the National Committee of Health Organisations, South Africa, June 1985.

57 *The Lancet*, No 8462 (November 2, 1985), pp 1000-1001; *The Lancet*, No 8430 (March 23, 1985); *British Medical Journal*, Vol 292 (February 22, 1986), p 506; *JAMA*, Vol 254, No 22 (June 12, 1987), pp 3066-3067; interview with Professor Frances Ames by Eric Stover in Cape Town on December 17, 1985. Some 60 per cent of NAMDA's current membership of 1,000 doctors and dentists are black. The new association was created partly in reaction to MASA's behaviour over the Biko case and partly as an expression of concern about broader health issues which NAMDa members felt MASA was not properly addressing. Dr. Diliza Mji, 'The struggle for Health: The Struggle for Democracy', unpublished paper presented at the Institute of Social Studies, Amsterdam, December 1986; Memorandum submitted to the WMA by the National Committee of Health Organisations (including NAMDA), June 1985; interview with Dr. Jerry Coovadia by the author in Washington, D.C. on June 23, 1987.

58 Jenkins, 'The MASA letter', pp 234-240.

In Defence of Civil Rights

A Biographical Sketch of Dr Ramanadhan

A doctor who renders help to political activists often comes into conflict with oppressive state apparatus and is himself a target of repression. Dr Ramanadhan's life and death exemplifies this. He was a civil liberties' activist, a human and rational doctor's who fell to a police bullet in Warangal in September 1985. This sketch is reprinted from an anniversary tribute to him published by the P U D R New Delhi.

MUSTIKUNTALA is a village in Mahira taluq, Khamamam district that separates the Telengana from the Andhra region. In the thirties the village had a small population of about three hundred, subsisting on cultivation of dry and barren land. But now the village has become prosperous thanks to canal irrigation and even has a high school.

It was in the village that Dr. Ramanadhan was born on October 16, 1933, third son of Anatarama Rao and Rajyalaxmi. The family had about 30 acres of dry jowar land. Ramanadhan was the first person in the family to insist on higher education and had to struggle his way to become a doctor. He completed his primary education in the village and did his secondary school is nearby Khammam. Despite family oppostion he went to C.R. Reddy College, Eluru for his intermediate, and then to the famous Nizam College, Hyderabad, for his B Sc. degree. During his Nizam College days he become part of a group of students who were peripherally associated with the All Hyderabad Students Union. The house of Dr. Balachandra Paranjpaye, well-known veteran of the Telengana struggle, was the cenre for all young men in those days. Dr. Paranjpaye remained a source of guidance to Ramanadhan all his life.

After his B.Sc he took up a number of irregular jobs for more than a year, which included teaching and a job as a medical representative. Around this time he also got married. Then he got admission in M.B.B.S. in the newly-established Gandhi Medical College, Hyderabad. Financially, these were his bad days, having to live on the limited amount sent by father and his house surgeonship. He joined Osmania College for his Diploma in Child Health. It was during this period that he became a student of the famous left wing intellecual, Dr. Rajagopalan. Both were to work together, twenty years later, in the APCLC. Throughout his student career he remained on the periphery of then student movement. In fact, later on too he never became part of any organised political group.

After completing his studies he joined government service. First he taught in Kakatiya Medical College and worked in Mahatma Gandhi Memorial Hospital where he was to die later. Then for over four years he worked in the listless primary health centers at Chityala, Vangara and Husnabad in the Warangal and Khammam districts. Primary health centres then and now are private clinics for those who weild social power in the village and not clinics for the people. Invariably Ramanadhan could not adjust himself to work in this kind of framework. Husnabad became his last job.

Husnabad, a taluq centre, is a big village with around a population of 10,000. If Health Centre serves a number of the neighbouring villages. The earlier doctors and compounders had established a routine pattern of corruption. They did not attend the centre, but used the medicines and equipment of the centre to run their own private clinics. When Ramanadhan took charge, he put an end to this practice. This earned him the warth of the compounder, the Block Development Officer, and the Samiti president who all used to share the booty. But Ramanadhan struggled against these forces and became a very popular doctor. Eventually things came to a head when he was asked to issue a death certificate for an unidentified young girl in the house of the Samiti president. The doctor refused. And soon after, he resigned from government service.

He set up his own children's clinic on Jayaprakash Narayan Road, Warangal, in 1968. He was the first pediatrician in the town and soon became very popular. It was from this period that he consciously engaged himself in social activities outside his profession.

In the early seventies, before the APCLC was formed, he became a kind of supportive centre for a number of people involved in a variety of problems and issues. He helped his friends run a monthly that became a well known non-commercial journal in Telegu, *Srjana*. In fact, be it a writers' organisation wanting to hold its first meeting in Warangal or a young couple facing family opposition to their marriage every one sought his help and received it. In a dramatic incident he rescued a young girl and conducted her marriage. The girl's parents were influential people with powerfull connections. In the midst of the marriage function, the police arrived and arrested the bridegroom and his friends, on charges of abduction. Eventually the girl won her battle in court.

In early 1974, along with another well-known doctor of Warangal, Dr. Amjad Ali Khan, he became a founder member of APCLC in Warangal. Around the same time, he also organised a polyclinic in Warangal. When emergency was declared in 1975 all activities ceased. The General Secretary of the APCLC, advocate Prattipati Venketewarli was among the first to be arrested. Ramanadhan was also arrested, which led to the closure of the people's clinic, virtually the only democratic activity in the town at that time. He was taken to the illegal camp

maintained by the police at Pakala reserve forest.

Pakala is a wild life sanctuary where two bungalows meant for tourists were turned into police camps during the emergency. A number of young people arrested during the emergency were detained here and tortured. Among them was the sole eye-witness to the Girapalli encounters in which four young men were shot dead in cold blood by the police. Dr. Ramanadhan, who was a fellow detainee of the eyewitness, as to be of crucial assistance to the Tarkunde Committee which brought out its famous report on these encounters after the emergency. He was shifted after three weeks detention at the Pakala camp to Warangal Central Prison, which serves as the main prison for five north-western district of Telengana.

After the lifting of emergency, the central government appointed the Shah Commission of Enquiry which managed to submit its report, although no action was taken on it. But anyone who has gone through the reports of the Commission can see that the largest number of crucial affidavits to the Commission from Andhra came from the Warangal region. Again, the aborted Bhargava Commission, which was appointed to enquire into encounter killings in Andhra, was helped by the mobilisation of crucial witnesses. In both instances, Dr. Ramanadhan played an unobtrusive but significance role.

In November 1977, a tidal wave hit Divi Seema in the Krishna district on the east coast. It led to hundreds of villages being marooned and to the death of thousands of people. Ramanadhan and his team was the first team of doctors to enter the inundated areas, before any government organisations or voluntary agencies. Later the team came back, raised funds, medicines and material necessities and went back to the flood affected areas and held a mobile medical camp for a month.

In late 1979, the junior doctors in Warangal along with their colleagues in the rest of the state went on a strike for over seventy days. The government attempted to suppress the strike at one level by repression and at another level by generating a mass hysteria against the striking doctors. Dr. Ramanadhan took the initiative and organsied a people's clinic opposite to the government hospital with the help of the doctors on strike. The clinic became a centre for both the medical service and the strike. The ramshackle pandal outside the hospital became so popular that poor people requested the dcotors to continue the clinic even after the eventual withdrawal of the strike.

In an unusual incident, Dr. Ramanadhan assited a Brahmin widow whose husband had been the priest of a temple. After his death the widow managed the temple. But the trustes rejected her, presumably because of the land value of the temple, on the ground that a woman cannot be a priest. APCLC Warangal, under Ramanadhan, took up her case and eventually won the battle for her and also set a precedent.

What earned him the wrath of the Warangal police was systematic efforts by the APCLC to expose the lawlessness of the police. Hundreds of illegal arrests, torture, setting up of armed police camps in villages and colleges alike have become routine in past years. Since 1983 at least 12 people were killed in either police lock-up or in so-called encounters. In Warangal district, the APCLC investigated each of these instances and brought police violence to the notice of the public. In a number of cases it provided legal help to the victims of police harrassment. It challenged the constitutional validity of the armed camps in the colleges and villages of Warangal. As the APCLC steppted up its campaign, it has become a fetter on the arbitrary behaviour of the Warrangal police establishment.

Initially the police began with a systematic campaign that APCLC was a extremist front organisation. APCLC's own diversified activities was projectd as an organisation that is working in the interests of extremists. Later, APCLC activities began to be implicated in false cases. In 1984, two of the activists were implicated in a case of obstructing police from discharging their duty. The case was later dismissed.

In January 1985, Dr. Ramanadhan was arrested along with Dr. K. Balagopal and K. Seetarama Rao. They were charged with, among other things, distributing arms to the extremists. The doctor was released on bail a week later. While he was in police lock-up, in a telling incident, the policemen who had arrested him brought his child for treatment to the doctor. The incident indicates the extent to which he had become popular, even among the policemen of Warangal.

Dr. Ramanadhan's social awareness helped him to understand the social origins of the diseaes of his patients. He did not confine himself to giving medicines but tried to spread a scientific outlook. It was in this process that he wrote the famous book *Medical Guide* (in Telugu) which was addressed to the people and not to the health workers. The book became very popular. A second edition came out within an year and now, after his death, a third edition has been printed. Even after establishing himself as a popular doctor, his interests in studies remained. He took part in different seminars and meetings of the profession. A few weeks before his death he participated in a conference held at Nizam Orthopedics Institute. This professionalism was to remain with him till the very end. In the last twenty minutes of his life en route to the hospital, he kept discussing with the young doctor, who took him in his car, the diagnosis of his injuries and suggesting treatment.

In a sense his involvement with his profession helped the civil rights movement which in turn made him a better doctor. He was a doctor not only to rickshaw pullers, hawkers, and slum-dwellers but also to the policemen and their children. A few days before his death, an SI who

was leaving the town on promotion came to him and gave him sweets by way of farewell. The SI is believed to have said that for Warangal police he is not only a civil rights activists but also a doctor. Ramanadhan accepted the sweets with the confidence in human relationships which he had built over sixteen years of service to his patients and to the people of Warangal. Evidently the policemen who killed him did not share such values.

But perhaps his patients, people for whose lives he had fought and whose rights he had defended shared them. That is why on September 4, defying Section 144 and undeterred by the presence of armed police, they came in their thousands and paid their respects to the man who fought for them. His life and death will remain a defiant celebration of human values and a never ending source of inspiration for the democratic movement.

Aftermath

The news of Dr. Ramanadhan's death reached Delhi on the morning of September 14, 1985. Two prominent Delhi dailies carried a report, field by a national news agency, that Dr. Ramanadhan, vice president of the APCLC was killed by 'extremists' in his clinic on the previous day. In fact no correspondents of this news agency, which does not have a Warangal office, were present in Warangal on September.3. The report was filed from Hyderabad, within two hours of the incident. All other stae-level and local dailies carried reports by their Warangal correspondents saying that the doctor was killed by armed policemen accompanying the dead body of SI Yadagiri Reddy.

Next day, the superintendent of police, Warangal, contradicated the local newspaper accounts and stated that Dr. Ramanadhan was possibly killed by some extremists. When eye-witness journalists pointed out that uniformed policemen were seen entering Dr. Ramanadhan's clinic, he stated that they had gone to the rescue of the doctor. On the same day, Vasant Nageswara Rao, home minister, made a statement on the incident in response to a notice under rule 329, tabled by 23 memebrs in the state assembly. The home minister maintained that the sugges tion that the police were behind the incident was 'baseless'. He added that the incident took place long after the funeral procession of armed police had left the place. He also indicated the involvement of extremists factions in the murder. Meanwhile APCLC had released its own report on the incident.

The postmortem report, quoted by the APCLC, states that the death was caused by a service revolver fired at point blank range. On that basis and other corroborative evidence APCLC demanded the immediate susupension of the senior police officials and ordering of a judicial enquiry. The government refused to hold a judicial enquiry. Instead a CBI CID enquiry was ordered. A few weeks later the government suddenly discovered that two policemen were guilty of dereliction of duty. They had let their service revolvers be stolen from them two months prior to the incident! Presumably the stolen revolvers were to be traced to the 'extremists' who somehow became part of an armed police procession and killed the doctor without anyone ever noticing it.

Meanwhile police claimed to have identified the six people who were involved in the Yadagiri Reddy murder case. The case itself was brought under the Terrorist and Disruptive Activities (Prevention) Act, 1985 which came into effect in Andhra Pradesh from August, 1985. This was the first and the only murder case so far under the act in the state. Two of the accused, Nageswara Rao and Ramakrishna, were killed in a so-called encounter in April this year. The other accused include Dr. K. Balagopal general secretary, APCLC, who was let out on bail and Dr. P. Varavara Rao, general secretary of the Revolutionary Writers Association, who is still in jail.

Eventually the CB CID enquiry did take place An SP who was till recently in the Andhra police was deputed for the enquiry. He visited Warangal in late October for three days and submitted the report to the government. It has not been released to the public or even to the assembly so far. But we understand that the report came to the conclusion that the "assailants remain unidentified".

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Why Are Torturers Never Punished?

Case of Archana Guha

peter vesti

Archana Guha was arrested in July 1974 and subjected to 27 days of torture in the hands of the police. She was not charged formally but was made to believe that the arrest was because of her association with the Naxalite movement. After her release a physically shattered Archana filed a case against her torturers which has yet to be decided upon. This article was first published in the Danish Medical Bulletin, *1988.*

UNTIL recently, little was known about the various aspects of symptomatology or about treatment of torture victims. At the Rehabilitation Centre for Torture Victims in Copenhagen (RCT), over the past five years we have treated torture victims and compiled information about the essential aspects of treatment of these most unfortunate human beings.

These experiences have made it increasingly clear that the end-purpose of torture is to 'break' the person, i.e. to transform a formerly healthy member of society into an individual broken in spirit and unable to function efficiently in any aspect of personal or public life. An appalling insight by the torture victims is that the vast majority of people are indifferent about what has happened to them; even more horrifying is the undrstanding that the torturers continue to perform whatever duties they are assigned (perhaps including torture) and are never brought to justice, often in spite of a change of national regime or the election of new political parties.

This has been seen in various places and at various times in the world. International attention has focused on the very limited trials of only a few of the accused torturers in Greece after the fall of the military government [1], the strange circumstances surrounding the death of Steve Biko in South Africa [2], and the impotence of the newly elected government in Argentina to deal with criminals who were torturers under the former military junta [3].

A case that will illustrate such occurrences is the story of Archana.

In 1980, an Indian national by the name of Archana Guha was flown to Copenhagen to receive treatment at Rigshospitalet, one of our University Hospitals. Thrity-nine years old, she arrived on a stretcher, had years before been tourtured, and was now suffering the consequences. With the help of Amnesty International, she was transferred to Denmark to receive treatment at the centre later to be developed into the Rehabilitation Centre for Torture Victims (RCT). Following is a review of the circumstances of the case and the sad recognition that now, many years later, Archana's case against her tortures is still pending before the court in Calcutta.

The early 1970s were a violent time in West Bengal. A militant Marxist grouop, the Naxalities, were ravaging the countryside, and many people were caught inthe crossfire between it and a government using all means to fight it. One such person was Archana Guha. Educated as a school teacher, in 1967 she was appointed. head mistress of Kolorah Girls Junior High School outside Calcutta.

Arrest and Torture

On July 17, 1974, Archana was arrested in the middle of the night together with her sister-in-law and a friend staying in the house. No formal charges were brought against them, but they were made to believe that their arrests were due to some connection with the Naxalite movement. The matter was never brought to court.

Twenty-seven days of torture followed at Lalbazar, headquarters. of the Calcutta police. First, Archana was made to witness the assault on and torture of her sister-in law and her friend. She was then tied, hands and feet, slung upon a pole, head down, and severely beaten on the feet (falanga). The five policemen involved took turns hitting her and kicking her on the hips, and later they burned her toenails with cigars. She was threatened with rape and made to understand that her family would also be tortured if she did not cooperate. When she was not in the torture chamber, she was kept in a small, dark isolation cell. During the torture she was forced to sign several blank papers. She was suspended by her hair and, later, 'brain washed'—a term used by torturers for a procedure in which they begin a movement to bang her head against the wall, but at the very last moment before her head struck the wall, pull her back.This was done 10-20 times.

It seems likely that the three women were arrested because of Archana's brother Saumen. He was also accused of involvement with the Naxalite movement. He was arrested on the August 6, 1975, and when Archana's torturers learned of his arrest, they stopped torturing her. Saumen, himself, was allegedly on two occasions subjected to torture for periods of six and 14 days.

Archana never came before a judge, even though the law specifically states that this must take place within 24 hours of the arrest. On August 13,1974, Archana was brought to the Presidency Jail In September 1974 she was released, but immediately after was again detained under the Maintenance of Internal Security Act (MISA). She was

released on parole in November 1976 and on May 3, 1977 was also released from MISA detention. The Left Front (a coalition of left wing parties) was now in power in West Bengal.

After the torture, Archana had multiple symptoms. She suffered headache, swelling around the left eye, a burning sensation in the head, difficulty breathing, irregular periods as well as bleeding from the rectum. She suffered several infections in the urogenital system. She also suffered difficultly sleeping, had no appetite, and poor concentration.

Her condition deteriorated, and gradually she lost muscle strength in her arms and legs, grew weak and also lost sensation. She was confined to bed and to a wheelchair. From December 1975 to February 1976, she was hospitalised in the SSKM Hospital—was under round-the-clock police guard—but did not improve. She was later transfererred to the Medical College Hospital, still under police guard, still paralysed, and was told that she could expect no major improvement. An X-ray at that time showed a fracture of the seventh cervical vertebra.

Upon arrival in Denmark four or five years later, Archana was still suffering from a number of symptoms. She had constant headache, nausea, and muscualar pain in the neck and shoulders. She was constipated and slept poorly, suffered tremous, and was still unable to concentrate. She was mostly confined to bed, being unable to walk without human support.

Neurological examination showed a decrease in strength in the arms which were also somewhat atrophic. Her legs showed a decrease in strength bilaterally, both for flexion and for extension. Both legs were atrophic. The patient was unable to walk unless supported by two persons. The reflexes could not be elicited.

Examination of the skin revealed several scars and pigmentation changes compatible with the history of combustion and subsequent ulceration. The size of the scars were in accordance with the size of a scar caused by the glow of a small cigar. The patient also described pustulations and alopecia as well as discoloration after being suspended by her hair. This is also in accordance with known sequelae to traction alopecia.

Beyond doubt, most of the patient's symptoms and signs are the result of torture. It is equally clear that poor conditions in the prison (possibly a deficiency in protein) as well as the depressing effect of prison conditions in general and uncertainty about the future, sustained and possibly aggravated Archana's condition.

In August 1977, soon after she was released, Archana filed a petition accusing five policemen of having violated relevant sections of the Indian Penal Code. At that time, she was unable to walk and had to be carried to the courtroom to make a personal appearance. The accused were: Ranjiit Guha Neogi (Runu), officer in-charge of the investigation; Santosh De; Aditya Karriaka; Arun Banerjee; and Kamal Das, alias 'the golden hand', known for being able to make most people talk under torutre.

Archana also requested a reasonable compensation for almost three years in jail and was offered a few hundred rupees. The authorities would not even bear the expenses for her treatment at a major private clinic in Calcutta. With the help of Amnesty International and human rights groups as well as women's groups in India, attention was focused onthe case. Finally, the government in West Bengal agreed to pay the expenses involved in transferring Archana to Rigshospitalet in Copenhagen.

After intensive treatment, rehabilitation, and physiotherapy, Archana's health improved and gradually she was able to walk again. She later returned to India. While under treatment, she became painfully aware that her torturers in no way were affected by her petition and that the authorities apparently did not believe her and wanted the whole thing to be forgotton. We believe this influenced her rehabilitation negatively. During her stay in Denmark, she had made the acquaintance of an employee at Rigshospitalet, and Archana later moved back to Copenhagen to settle permanantly.

And what happened about the court case submitted in August 1977? Nothing much, I regret to say. None of the accused officers have been suspended. Death certificates have been produced for two of the accused (Aditya and Arun). Kamal Das (the golden hand) has disappeared and records seem not to indicate that he was employed by the Calcutta police in the first place. Every legal loophole has been used and abused to prolong the proceedings at the court. The accused have claimed that Archana's lawyer (A. P. Chatterjee) could not represent Archana because he was also the government's standing council. This was put to the high court as well as the Supreme Court twice before the legitimacy of his representing the client was confirmed. It appears that the evidence was misrepresented and the court misled the first time.

During the 1980s several human rights organisations and women's organisations followed the case and even demonstrated outside the court room—not for a verdict of guilt, but only for a speedy trial. Because of this, the accused filed a petition asking that these organisations be tried for contempt of court and that reportage of the trial be prohibited. The local magistrate did bar the newspapers from publishing the evidence of the witnesses. However, this was not abided by and was rejected by a higher court.

Aggrieved by the above-mentioned decision of the local judge, a new petition was filed by the accused requesting the transfer of the case to a new magistrate. And finally it appears that a new petition has been filed asking for change of judge as well as the place of trial. In addition to these obstacles. the accused have repeatedly requested

stay orders for various reasons, making it almost impossible for Archana to go on with the cse, considering that she is living abroad.

Conclusion

Ten years have lapsed, the case lingers on and still no verdict is insight. At the end of the 1970s many cases were brought against the police for torture; however, all other cases have been dropped. Very few people can keep a court case going for years; the legal expenses involved are astronomical. A very storng personality is needed to go through these ordeals with so little hope of success.

Archana's lawyer has taken on the case on a humanitarian basis. He, himself, has been threatened on many occasions, and threats have also been made against his family. The whole court case seems to be a clash of interests. However, it is difficult to see who the accused party represents. Very expensive lawyers have been helping the accused (and prolonging the court case) all these years, and a question has been raised as to who pays their fees. In whose interest can it be to suppress a court case like this, to keep it from reaching a verdict?

If it had not been for support from internatioinal organisations, local human rights groups, and women's organisations as well as the press and television, this case might also have been dropped years ago. This would not be in the interest of a democratic country like India, where torture is prohibited by law.

In this context, we must also consider the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment and Punishment (4), the United Nations convention prohibiting torture and setting up rules and regulations concerning international aspects of torture. So far, 43 states have signed the document, and of those, as of December 1987, 17 have ratified it. India has not yet signed this document, whose aim is to help progressive authorities bring about justice.

Archana was forced to spend three years of her life in prison, was brutally tortured, and only after intensive rehabilitation has been able to begin to live a reasonable life again. Three years of a lifetime is a long time. Cases of tortures being convicted and punished are virtually nonexistent as are cases of compensation paid out to the victims. More than three weeks of torture cannot be undone; three years of a life cannot be given back. The duty of society must be to compensate at a realistic level as well as to use such occasions to better it control over and insight into various services in our society, including the police. We must remember that the police force reflects that society in general. The time has come to recognise torturers as the criminals they are.

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State Torture: Some General, Psychological and Particular Aspects

fernando bendfeldt-zachrisson

State political torture has been practised in Latin American countries and is well-documented. What are the particular aspects of this practice? What are the elements which contribute to a person participating in torture? Who is the real torturer?

WE may describe torture as that extreme and deliberate form of violence inflicted upon a victim who experiences it consciously, and who has no control over its form or duration. It produces pain and mental or psychologial stress and is intended to destroy the victim's will in an attempt to perpetrate a determined order of power relationships. When such practice is structured into the ways a state governs over the people of a nation, we may refer to it as state torture; but when the primary target is the citizens who oppose, or are believed to oppose, the order of relationships established by that state, we may talk of state political torture. In the American continent the use of torture as an identifiable administrative policy has been recognised in several countries [1-4], but the cases of Chile, Uruguay, Argentina, Paraguay, El Salvador, and Guatemala have become exemplary over the past ten years [1, 5-9]. In these countries thousands of citizens who oppose their governments have been (and are being) tortured in semi-clandestine torture centers, where similar methods and techniques of suffering are implemented. The subjects for torture are identified and selected by branches of the military and then kidnapped by "heavily armed men dressed in civilian clothes" who operate with impudent legal immunity. The victims are then taken to camouflaged jails where a minority of those who enter are able to come out alive to tell the story.

What is the purpose of such torture? On first hand it may seem that the answer is information. But if we review the methods and understand that in these countries torture has been made a stable semiclandestine institution of the state, its primary purpose can no longer be considered simply to secure information or a confession. How could we believe information is the aim when pregnant women are burned in the nipples and genitals and then receive electric shocks in the uterus producing either abortion or brain lesions in the fetus [3]? Or when splinters are inserted into the eardrums? And besides the cruelty *per se*, how valid could a confession be under those circumstances or under the effects of stupefacients? No, here the specific purpose served by such brutality seems to be primarily the destruction of the individual in his/her most basic humanity, while the general objective seems to be the attempt to preventing dissidence—a way of exercising and maintaining power by terror.

By definition, torture assumes the involvement of at least two subjects: the torturer, who applying torture strives for maximal submission of the victim under his physical control, and the victim, whose actual circumstance makes an immediate defensive counterviolence impossible. In the following sections, I will examine some aspect of the methods of torture, the torturer and the effects of this practice.

Methods of Torture

When torture is part of the state policy, the methods for destroying the morale and physical integrity of the victims are ample. Breaking down the victim, whether by producing an organic impairment of the mental functions [10] or by the effects of stress [11, 12], is achieved by the use of both rustic and sophisticated methods and techniques. What, when and how to torture is something established by accumulated local and international experience. Not infrequently, it is assisted by modern medicine and research findings, even with direct participation of physicians [13-21]. There are testimonial reports of medical doctors supervising the process of torturing, or monitoring the procedures so that unconsciousness and death are avoided while maximum stress is applied [1].

The scientific approach to torture has been taken seriously by some. In a recent article published in the *Journal of Medical Ethics*, 'On the Permissibility of Torture', G. E. Jones argues in support of torture [22]. Justifying it on utilitarian grounds he states:

> It (torture) cannot involve death, and must utilize the most advanced medical techniques available so as not cause needless psychological or physical harm. Only the minimal amount of pain necessary to obtain information would be inflicted (italics added).

And further, in a clearly marketing way, while discussing the cost-benefit ratio of torture (which he compares with solar energy: it pays in the long run) and under what he calls humane (sic) torture, he goes on saying that:

> The state of technology is such that we can stimulate certain centers of the brain such that we can inflict pain without physical abuse or *physical side effects*. (italics added)

The mode of torture that Jones proposes, which apparently includes electro stimulation or microsurgery to affect brain centers, selectively ignores that torture is terrible as an experience and not only for its visible sequelae. What Jones seems to be concerned with is the public or

observable evidence that torture had taken place, rather than what it represents, or the damaged self and relationships the torture victims are rendered with. Torture is a devastating experience that accompanies the surviving victim the rest of his/her life, affecting, as I will explain later, more than the physical or physiological aspects. Jones' statement that, "Only the minimal amount of pain necessary to obtain information would be inflicted" is naive. Would't a torturer ever accept having inflicted pain in excess of that necessary to his victims?

The pain and the stress caused by different methods of torture need to be multiple, variable and unpredictable. This way the victim's attempts at behaving in consistent ways or developing personal behaviour patterns to better sustain the suffering are frustrated. The methods and techniques of torture are often the same in the six Latin and Central American countries (Table 1), even to the point that many types of torture receive the same name (Table 2)—a case of internatioinal cooperation.

The catastrophic existential event that torture represents for the victim will certainly leave a permanent stigma in the survivor and his/her basic social nucleus. How, and to what extent, the terror, humiliation, loss of dignity and physical suffering will mark the victim is something that cannot be generalised. The structural characteristics of the victim's personality are important: the victim's clarity and strength of morale, sense of purpose and comradeship and even hatred of the system that brings the suffering [21]. But the effects of torture on the victim will also depend upon the dose of experienced violence, that is, the duration and intensity of the stressor.

The extent of the injury should be measured not ony by the bodily deformity or loss, or impairment, but by the emotional significance attached to the experience which often leads to a radical alteration of the person's whole life [23, 24]. Torture results in anxiety, difficulty in thinking, loss of self-esteem, social withdrawal, decrease in productivity and abandonment of goals [1, 14, 23]. For those who can no longer resist and who broke down, additional guilt and despair awaits.

From a psychiatric point of view, torture represents a situation of massive stress which unequivocably provokes anxiety, brought about not only by pain and mortifications, but also by uncertainty. Under torture, the threat of destruction is more than an imminent possibility—it has already started. Yet what the victim lacks is access to knowing how, when or if the destruction is going to be completed. In psychiatric language, the symptomatic post-effects of torture, together with other psychological traumatic events of inordinate nature and outside the usual human experience, fall in what are called post-traumatic stress disorders [25]. Briefly, these disorders constitute a condition that results in the contraction and disorganisation of the ego [26], hence to a symptom complex, acute or chronic characterised by: 1) recurrent and intrusive recolections of the traumatic event and nightmares in which the event is re-experienced as it was or in a representational way; 2) dissociative states that last from minutes to days, in which the individual behaves as if the trauma were recurring, because of an association with an environmental or ideational stimulus that elicits them; 3) constriction of affect, reduced responsiveness to the surroundings, and feelings of estrangement from others; 4) hyperalertness, exaggerated startle response, sleep disturbances, memory impairment, etc. Yet, as has been observed, the symptoms brought forth by deliberate man-made disasters, such as torture, often exceed other stressors in severity and consequences and may even precipitate premature death [27].

Table 1: Methods of Torture[a]

1. Environmental Manipulation:
   - Social deprivation (isolation from family and friends)
   - Isolation (restrictionof company, sex, work, relaxation, food)
   - Sensory deprivation or overload (solitary cells, noises, reflectors, etc.)
   - Sleep deprivation
2. Pharmacological Manipulation:
   - Parenteral barbiturates and stupefacients
   - LSD and related drugs
   - Apomorphine
   - Corrosive chemicals
   - Cyclophosphamide
   - Muscle-paralyzing drugs (e.g., curare)
3. Coercive Methods:
   - Forced seeing or hearing others being tortured (friends, relatives, spouse, children)
   - False accusations
   - Occasional indulgences
4. Somatic Methods:
   - Forced standing: prolonged standing in a required position, usually undressed.
   - Cold water: irrigation or submersion in cold water
   - Beating: with iron rods, rubber truncheons, whips, batons, sticks, etc.
   - Starvation: deprivation of water or food
   - Mutilation: dismembering of various parts of the body
   - Breaking bones
   - Sexual molestation: stripping, touching, attempted rape
   - Rape: homosexual or heterosexual
   - Electricity: electric shocks applied specially to eyes, teeth, head, genitals, rectum; "electric bed"
   - Fire: e.g., welding torches applied to head, eyes, genitals, etc.
5. Psychological Methods[b]
   - Denigration with insults, false accusations, use of brutal and threatening language, threats of execution
   - Sham execution
   - Execution of family members or friends in front of the victim
   - Video or audiotapes of the torture of other victims. including torutre of relatives, spouse and children
   - Witnessing homosexual or heterosexual rape performed on friends, relatives, etc.

a See references 1, 3, 5, 6, 7, 49.
b The separation of psychological from somatic is ony made for clarity sake. Any form of torture encompasses both psychological and somatic effects.

Although not all researchers agree [4], some studies have found that the psychological effects of torture are sufficiently characteristic to constitute a 'torture syndrome' [28, 29]. However, we still know little about what occurs to the human body and mind as the result of torture, notwithstanding the psychic and somatic changes observed. In general, the investigations of long-term psychological effects of torture are rare. However, a recent Danish study [4] sponsored by Amnesty International in which 135 victims of torture were examined medically and psychiatrically gives us an idea. The study showed that at the time of the examination, conducted between six months and a year after torture had taken place, 90 per cent of the victims complained of various symptoms which arose in conjunction with or following torture. Of those, 75 per cent presented psychiatric symptoms which included impaired memory, impaired concentration, mental changes and sleep and sexual disturbances. All the subjects had been healthy prior to their arrest. On the other hand, Allodi and Cowgil [28] investigated 41 cases of torture among the thousands of refugees from especially one Latin American country, who had migrated to Canada. The victims studied were 32 males and nine females, whose ages ranged from less than ten to 46 years of age (mean age 26.9). Twenty-five per cent of them had some university training; and except two females, they had experienced a total of 112 incarcerations ranging from weeks to a year (one victim had been imprisoned 11 times in five years). All were subjected to physical and psychological abuse. Allodi and Cowgill concluded that all suffered from a homogenous psychological disorder marked by severe anxiety, insomnia with nightmares about persecution, violence or their own torture experience, somatic symptoms, phobias, suspiciousness and fearfulness. In the case analysis they found that there seemed to exist a positive relationship between the individual ideological preparation, commitment and group support and psychological recovery from torture.

The sequelae at times could lead also to lesions in organs of functions not directly subjected to torture. For instance, Lunde, Rasmussow and collaborators (30) studied the sexual function of 17 men exposed to torture. They found that independently of cranial or genital trauma or severity of torture, 19 per cent of the studied victims presented sexual dysfunctions manifested as decrease in libido and/or erectile dysfunctions, in absence of abnormal pituitary or gondal hormones. In another study, Jensen Genefke and collaborators reported cortical or central cerebral atrophy, as determined by computerised axial tomography, in five non-alcoholic, previously healthy men ages 24 to 39 [31]. These men had been exposed to severe and prolonged tortures (mean of four years), and all had symptoms consisting of inability to concentrate, headaches, anxiety, depression, asthenia, sleep disturbances, cerebral asthenopia and sexual dysfunctions for several yars. A suggested possible mechanism, assuming that the atrophic changes cannot be attributed to head trauma, has been the possibility of high levels of cortisol secondary to the chronic severe stress of torture[32].

> We did not dare to kill them all (the political prisoners) when we could have done so and one day we shall have to release them. We must take advantage of the available time in order to make them go mad.
>
> Major Arguimides Maciel
> Director of Libertad Prison
> Uruguay

When confronting human behaviour, especially if it is deemed highly negative in quality, psychiatrists and field-related professionals tend to seek the roots of such behaviours primarily in the individual, or, at best, in his/her immediate surroundings. In such a narrow view, the torturer's behaviour could be easily conceptualised as one of a sadistic sociopath, brought about by defective parental discipline resentment over emotional deprivation, or more reductionistic, by congenital deficits or neurochemical imbalances in the brain. The problem with this intrasystemic orientation is that it selectively assigns causality intensively to one or a few individual elements, while disregarding or simply enumerating socio-economic conditions as aggregate factors in a multidetermined causality. The socio-economic system and the culture that derives from it is a basic element that shapes (and is shaped by) history, that dictates priorities and modifies environments.

Table 2: Specific Methods

'Submarine or 'Underwater treatment'	The victim is forced to submerge the head in a sink or bucket full of excrement, urine and water.
'The Hood:'	The victim's head is forced into a plastic bag, usually containing insecticide, until suffocation.
'Telephone:'	Beating from behind simultaneously on both ears.
'Parrot Perch' or 'Pau de Arrara'	The victim's wrists and ankles are tied together and the whole body is suspended from an iron bar under the knees, leaving the naked body doubled over and defenseless. In this position electro-shocks are applied and filthy water forced into the mouth.
'Dogs Pit:'	The victim is kept a few feet above the ground as (s)he is hanged from the hands which are kept tied together on the back.
'Hook' or 'Hanging:'	The victim is hanged from a rope which is hooked to a strap around the waist, while the hands are tied to the back.
'Mitrione's vest:'[a]	The garment is gradually inflated until it crushes the victim's ribs and makes breathing impossible.
'Picada:'	A straight pin inserted most commonly under the victim's fingernails.

a Named after Dan Mitrione, a North American AID official, allegedly an advisor to the Urguayan police in counter insurgency techniques, including methods of torture [3, 9].

By focusing on the individual or his/her immediate family as the source of aggression, this theory avoids a critical examination of the problem. It ignores the history of societies which value highly certain types of aggressive behaviours, which glorifies the aggressive war hero, and which pretend that amassing destructive power is a deterrence of war and a preserver of peace. In other words, for the study of the individual that concerns us here we must look beyond the individual and his/her family, into the conditions that typically prevail in society which favours—and benefits—from such practices. The political torturer works in the name of the society, the army, the interest of the nation, etc. He is not the isolated maleficarum that our conscience would like us to believe; he is a member of an organised group that operates semi-autonomously, but does so under the direction of branches of the government—an element of a network devised to preserve power and facilitate domination. Does this mean that anyone could become a torturer? The answer is not black or white. Perhaps a now classical experiment better illustrates the dilemma. Some years ago S. Milgram conducted an experiment, 'Behavioral Study of Obedien cy' in a laboratory at Yale University [33]. The experiment consisted of 40 volunteers who were led to believe that they were to take part in an experimental design on memory and learning. Each volunteer was instructed to administer electric shocks to a learner-victim whenever (s)he gave an incorrect answer to a question. Although the victims never actually received an electric discharge, they had been instructed to pretend as if the shock had been experienced. The experiment was designed so that when the punitive shock had reached certain voltage, the teacher-volunteer had the option of stopping the procedure, but was verbally encouraged, and even firmly ordered to proceed administering shocks at higher voltage if the learner-victim failed to complete the task. In the experiment none of the 40 subjects stopped prior to shock level 300, at which the victim began kicking the wall and no longer provided answers to the multiple choice questions. At the end of the experiment 26 of the 40 subjects completed the series by administering 520 volts.

This experiment tells us about human potentialities, and how given the manipulation of certain variables, one can end up doing something contrary to one's expectations. Certainly, there are many aspects of the experiment that one can question, eg., who were the real victims here. But besides that, let us not forget that this experiment was conducted in one of the most prestigious universities in the United States, in the name of science, and in a contemporary industrial society where science is highly regarded. Therefore, the setting was one in which the average person would have difficulty believing that such an experiment could be wrong [34]. Many of the participants continued to shock the victims under much stress and pain, fighting the contradictoms and trying to justify the scientists' recommendations.

The point of this experiment is that ascribing to the individual torturer a particular psychopathology reveals nothing, unless there is interest in maintaining that if there were no sadistic-sociopaths, or that if they all received some sort of psychotherapy, this type of practice would stop.

How does the torturer become a professional in torturing? First, the external and material circumstances of his background must be such that will accommodate his nefarious occupation with relative ease. Second, he must be educated to be efficient and perform his work with determination. This eduction, given in schools of torture [1,35], sometimes with "instructors" from other countries [3, 35], aims not only at providing the torturer with the techniques for torment, but also at preparing him psychologically and ideologically for his labour. How is this mental preparation achieved? First, it is done by emphasising the non-humanness of target groups. The victim needs to be perceived as a thing, as something contrary to what the state, and the social class it serves, regards as the communal good—by educating this way the propitious condet is motivated and targeted. Secondly, training is done by conditioning the prospective torturers that they are to act for the good of the nation, the good of the country. Therefore, even the most brutal actions do not constitute a violation of the high moral principles under which they allegedly operate. Third, by education that emphasises loyalty to an organisation that will protect the individuals involved and maintain secrecy. This services to exculpate residues of personal responsibility while subordinating individual will to that of the organisation. Fourth, instructors simulate an aura of mysticism aimed at encouraging a long-term commitment and group cohesiveness. Torturers are frequently called by pseudonyms that stress certain personal characteristics, and some are even referred to as doctors [1, 36].

Despite these training and accommodating personality traits, it is likely that the torturer experiences some mental stress by tormenting his victims, and realizes that he is also the object of exploitation. He is usually a low-ranking employee likely belonging to a social class exploited by those whose interests he serves, and the mean for ends that are not truly his. This situation not only places him in severe contradiction that resonate in his practice, but also demands attempts at resolution on the personal level.

According to Festinger [37, 38], if an individual holds two ideas of mental sets that are not psychologically consistent with each other, he will experience discomfort produced by such inconsistency (or dissonance). In order to resolve the conflict the individual will either change both ideas or add a third one that will bring about less incon-

sistency. In other words, he will have to come up with something that will convince him that one of the ideas or sets is worth pursuing, especially if the ideas have already been transformed into acts. What is characteristic here is that the arousal of dissonance always contains personal involvement, and, in order to reduce the dissonance created, self-justification is the rule.

If we extrapolate this to the situation facing the torturer, then we can see that he finds himself in a dilemma: he needs to rationalise, to deny, to protect himself from the perception of his own doing. He needs to obtain some (subjective) gains, or else, due to the nature of his practice, he runs the serious risk of being flooded with unbearable stress that would break into his psyche and probably make him collapse (testimonies of victims of torture and agencies for human rights indicate that frequently the torturers torment their victims in a state of alcohol intoxication or under the effects of drugs [39]). The literature reviewed does not contain interviews or direct 'studies' on the psychology of the torturer, but by the nature of his practice and the accounts given by some torture victims one can infer some of the major psychological response mechanisms assisting the torturer. First, the torturer, not blind to the perceptions of his own doing, needs to distort reality, to exculpate himself from what and how he does, and to come up with maneuvers that would obscure the relationship between his actions and the effect they cause. Here the basic mechanism is projection: the victim is held responsible for his/her own suffering, a "you're getting what you looked for." But that transfer of blame is probably not sufficient, for the torturer knows he himself is the victimiser. Something more is needed: the torturer needs to dissociate himself from the victim, create distance, and he does it by ascribing a derogatory status to the victim (something he has been taught to do) which is, in a deeper level, a projected hatred of his practice and of his ultimate sponsors, and that *that* he will destroy in the victim. The contention here is not that the torturer is *the* victim, but rather that the problem is, we may say, dialectical. The torturer is the victimiser, but he has within himself the victim which he denies. That is, he conjures out his condition of (also) victim, by projecting it onto the tortured, and proceeds to destroy it. Thus, by torturing his victim, the torturer obtians three victories: one that comes from the triumph of having projectively annihilated his own feelings of victimisation by torturing others. Another victory is from avenging in the victim, his own displaced hatred toward those for whom he works and who are the real beneficiaries of his necrofiliac activity. But also, at another level, by torturing the victim, the torturer obtains a triumph over his own fear of retaliation and death, by being in absolute control over the lives of others.

Conclusions

To know and not to act is as if not knowing at all.
Old Japanese Proverb

Torture, as a structured apparatus used by nations to structure and maintain a given order of power relations, constitutes part of the daily experience suffered by thousands throughout the world. The case of several Latin American countries, whose governments not only declare themselves democratic, but which are also referred to as democracies by other governments, is a crude and typical example.

Here, I have described some aspects of that particular kind of torture, its known short-term and long-term effects, and its purposes, and elaborated on some psychodynamic elements under which the man who carries on with torturing probably operates. Of course, these elaborations do not pretend to be exhaustive, nor are they intended to be an apology for the men who actually do the torturing. Rather, the point is that these men should be understood in the historical and social context in which they operate, without forgetting who pays, who supports and who benefits from their practice. Fortunately, there exists throughout the world agencies and organisations concerned and vigilant of human rights which have bravely denounced torture, but unfortunately, those who are in the position of strength to exert necessary effective pressure over nations which indulge in such practice give lip-service criticism, or plainly ignore it.

Finally, I want to briefly mention another type of state torture that should concern us, but which due to its nature and implications will require a separate study. I am referring to the systematic, well-orchestrated and 'dosed' psychological and physical violence that a country, by virtue of its economic and military might, exerts over smaller nations and their people. Such smaller nations, due to their own historical and concrete existing conditions, lack the effective means to prevent such violence, or to respond with a likewise effective (defensive) counterforce.

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Participation of Doctors in Torture

Report from Pakistan

mahboob mehdi

Under the dictatorship of the late Zia ul Haq, the state legalised and actively used torture as a form of punishment in Pakistan. Invoking Islam and its so-called laws, 'the medieval practices of flogging, amputation, stoning and so on were put to widespread use. Although the government has changed, these laws have not been repealed, nor have those who practised them, including the medical profession who colluded in these acts been punished. This paper was circulated at the at the AI's conference on 'Medicine at Risk'.

TORTURE has never been taken seriously in the official medical circles of Pakistan. The teaching of health professionals in various institutions of Pakistan does not bring into consideration the question of torture and how health professionals should react to it. The code of medical ethics of the Pakistan Medical and Dental Council does not mention any thing about torture. Doctors who take part in torture do not face any disciplinary action by the Pakistan Medical and Dental Council. In Pakistan the participation of doctors in the process of torture is usually legal and has been made part of the duties of the doctors.

The following types of the medical participation in the process of torture is seen in Pakistan.

(1) Under the execution of the punishment of the whipping ordinance of 1979—before the execution of the punishment commences, the convict shall be medically examined by the authorised medical officer so as to ensure that the execution of punishment will not cause the death of the convict. If the convict is ill the execution of the punishment shall be postponed until the convict is certified by the authorised medical officer to be physically fit to undergo the punishment. The punishment shall be executed in the presence of the authorised medical officer at such public places as the Provincial Government may appoint for the purpose. If after the punishment has commenced the authorised medical officer is of the opinion that there is apprehension of the death of the convict, the execution of the punishment shall be postponed until the authorised medical officer certifies him physically fit to undergo the remainder of the punishment.

(2) In many interrogation centres, the person to be interrogated is examined by the doctor and declared fit for interrogation.

(3) The conduct of the prison medical officer in most of the cases is very unethical and falls very short of the United Nation's declarations and codes of conduct. Instead of providing the standard and best available treatment to the prisoners, the prison medical officers usually behave as part of the prison administration and take part in torture.

(4) Cover-up activities by some doctors such as providing false death certificates or false clinical records of the victims of torture is very common.

(5) If the court orders amputation of a hand or a foot as punishment then according to the law it will be carried out only by an authorised medical officer personally.

(6) I have interviewed men and women who were tortured in different torture chambers and prisons of Pakistan. These victims have given evidences about the participation of doctors in the process of torture. One of the victims interviewed is a doctors and he faced his own class fellow-doctor in the torture chamber.

Usally the doctors:

(a) Advice the tortures about the actual condition of the victim's health.

(b) Revive the victims sufficiently to undergo further torture.

For the first time in the history of Pakistan, we in the Voice Against Torture (VAT) have systematically raised the question of medical ethics in relation to torture. In a three-day seminar held in Islamabad one full session was devoted to medical ethics in relation to torture, corporal punishment and other forms of cruel, inhuman or degrading punishments. We appealed to the Pakistan Medical and Dental Council to incorporate in its ethical code a clause against torture in line with the Declaration of Tokyo. In this session we declared that nobody in the world is medically fit for flogging. So doctors must not declare anyone fit for flogging. After the intervention of VAT in the medical scene of Pakistan more and more doctors have responded to the problem of torture. Thus recently at the 7th International Psychiatric Conference held in Karachi, different aspects of torture were discussed in a seminar attended by a good number of doctors. VAT fully coorperates in all such activities with its experience and documentary resources.

Torture was always endemic in Pakistan but during the last decade it reached epidemic proportions. Authorities often try to legitimise many crimes of torture by taking cover under religion. Due to this reason we are using the Declaration of Kuwait along with the Declaration of Tokyo. The Declaration of Kuwait is a good document relevant to the Muslim societies. It says:

> The medical profession shall not permit its technical, scientific or other resources to be utilised in any sort of harm or destruction or infliction upon man of physical, psychological, moral or other damage... regardless of all political or military considerations.

Voice Against Torture has been organised to achieve the following aims in Pakistan:

(1) To disseminate information among the people about the methods and purposes of all forms of torture prevalent here.

(2) To mobilise public opinion for the eradication of all forms of torture.

(3) To make the doctors realise that torture is a serious challenge to the medical profession.

(4) To make efforts that knowledge of torture and knowledge of the methods of treatment of people who have been tortured is incorporated in the teaching courses of doctors, physiotherapists, nurses, psychologists and social workers.

(5) To mobilise the opinion of the doctors in favour of the 1975 World Medical Association's Declaration of Tokyo.

(6) To make representation to Pakistan Medical and Dental Council to put the clauses against torture in it's code of medical ethics.

(7) To ensure that doctors do not participate in any procedure of torture. i e,

(a) They do not take part in cover-up activities such as providing false death certificates or false clinical records of victims of torture.

(b) They do not monitor torture by remaining present during any act of torture or by declaring any person fit for torture or by advising how far the tortures may proceed or by reviving victims sufficiently to undergo another bout of torture.

(c) They should not use their professional skill to extract information, control the prisoner or simply on punishment.

(d) They should strive to provide the best quality treatment to prisoners and people in detention; and should not have a biased attitude with them.

(8) To give all the support to the doctors who refuse to participate in the acts of torture, so that they and their families are not victimised by the different agencies of the state.

(9) To collect evidences against the doctors who have choosen to become instruments in the procedure of torture. To present these cases to the Pakistan Medical and Dental Council for necessary action; and to take these cases to the court so that the doctors may be tried for their criminal acts; and to expose them widely in the public and media.

(10) To mobilise opinion among the community of scientists in such a way that they should refuse to make instruments which could be used in the process of inflicting torture.

(11) To do research on all forms of torture, their effects and methods of treatment including rehabilitation.

(12) To provide free medical facilities for the treatment of victims of torture.

(13) To provide necessary specialised professional information to doctors who are treating victims of torture.

(14) To establish a specialised centre where victims of torture of any type could be referred from anywhere for treatment and rehabilitation.

(15) To keep cordial relationship with other anti-groups in the world. To exchange experiences with them and to participate in joint activities and seminars etc., with them.

(16) To cooperate with other human rights organisations nationally and internationally. To join hands with them for the struggle to eradicate torture throughout the world.

One important point to consider is that it is torture which has produced the struggle against torture. Geographically torture is not limited to few places. Irrespective of faith and ideology torturers are united internationally. They cooperate with one another. They exchange experience and technology. They do not like the struggle against torture. Those struggling against torture are in danger of becoming their victims themselves. It is, therefore, very important that those struggling against torture must also unite internationally irrespective of faith and learn from one another. They should exchange experiences and technology of the struggle against torture. They should plan measures for the protection of persons involved in anti-torture work in high risk areas.

Those involved in the struggle against torture and engaged in the task of treatment and rehabilitation of torture victims in high risk areas like Pakistan and many other third world countries need protection to ensure smooth, efficient and safe functioning. The following steps may serve this purpose:

(1) Recognition by the U.N. and relevant affiliated organisations.

(2) Support by Amnesty International.

(3) Support by different anti-torture organisations of the world.

(4) Support by different human rights organisations of the world.

(5) Participation in international seminars etc.

(6) Wide coverage in the international media.

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Doctor and Prisoner

Indian Prison Manual

colin gonsalves

THE Prison Manual contains several provisions relating to the health and well being of the prisoner. The duties of the Medical Officer are set out in Chapter IV. He has to keep a check on the medicine and the water supply. He shall oversee general sanitation. He shall examine and treat prisoners.

Under the provisions of Chapter XXXVI, when a prisoner dies, a report is to be made and submitted and the doctor plays an important role in this. If the prisoner is seriously ill and dies the relatives must be informed. If the death of the prisoner is "under circumstances raising a reasonable suspicion that some other person had committed an offence" this has to be reported to court in order that an inquest be held. Notices of death must also be sent to the municipal officer of health.

Immediately on the death of the prisoner the medical officer must be informed. The body must be left in the position found until the doctor examines the body. The medical officer is to prepare a report relating to the background of the prisoner and the circumstances of his death. This report along with the history of each prisoner is preserved for two years. Chapter XLV is titled 'Lunatics'. Normally most sick persons are to be sent to mental asylums. The provision most often relied on however, is the one which permits the government to keep the prisoner in a jail if no mental hospital is available for treatment of the prisoner. The exception to the rule has become the rule itself. Records are required to be maintained of the condition of the patient and the treatment given for a period of two years.

Criminal Procedure Code

Section 53 of the Code is as follows:

> 'When a person is arrested on a charge of committing an offence... that there are reasonable grounds for believing that an examination of his person will afford evidence as to the commission of an offence, it shall be lawful for a registered medical practitioner, acting at the request of the police....and *for any other person acting in good faith in his aid* (emphasis added)..., to make such an examination of the person...

Often this section is misused by the police. After torture the accused is sent to a doctor specially known to the police and co-operating with them for a medical report that the person was fit or for a report that injuries were found but they were inflicted by fellow prisoners.

Section 54 of the Code provides for medical examination of the arrested person at the request of the accused.

> When a person who is arrested alleges... at the time when he is produced before a magistrate or at any time during the period of his detention in custody, that the examination of his body will afford evidence... which will establish the commission by any person of an offence against his body, the magistrate shall, if requested by the arrest person... direct the examination of the body... by a registered medical practitioner...

Section 174 relates to the mode of inquiry to be conducted by the police in the case of deaths.

> When the officer-in-charge of the police station... receives information that a person has committed suicide, or has been killed by another.... or by accident, or has died under circumstances raising a reasonable suspicion that some other persons has committed an offence... he shall make an investigation, and draw up a report of the apparent cause of death, describing such wounds, fractures, bruises and other marks of injury as may be found on the body....

Note that the medical officer is not involved at any stage in this investigation. A complete medical examination is expected to be done by a lay person.

In the case of the death of a woman however, the section provides for an examination by the "nearest civil surgeon *or other qualified medical men appointed in this behalf by the state government* (emphasis)".

It would be interesting to study the background and performance of the doctors appointed by the government. In many cases it appears that these persons appointed must 'qualify' in that, they must be willing write reports and conduct examinations according to the bidding of the police. The need for an independent body of doctors free from the intrusive forays of government is most necessary.

Some Cases

Veena Sethi's Case (AIR, 1983, SC. 339) drew the attention of the Supreme Court to the atrocious conditions of the prisoners in the Hazaribaug Central Jail rendering them insane. The prisoners were detained in jail for very long periods of time though they were declared insane because "there were no adequate institutions for treatment of the mentally sick". The judge's were told that there was only one institution in the state of Bihar, for the treatment of the mentally sick and that was the Mansik Arogyashala but that was overcrowded. The judges said "we have had occasion to see lunatic asylums in one or two states and we find that the conditions in these is wholly revolting and one wonders whether they are placed for making insane persons sane or sane persons insane".

The court then took up the case of Gomia-Ho. He was convicted in 1945 and sentenced to three years in prison. In 1948 he was found to be of unsound mind and directed to be kept in the Hazaribaug Central Jail since there was no place in the mental hospital. Half yearly reports regarding his mental conditions were required to be submitted

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Implication of Physicians in Acts of Torture in Uruguay

gregorio martirena

In 1984, prompted by public protest against the widespread use of torture against political prisoners, a National Committee on Medical Ethics comprising doctors, medical students and lawyers was set up. Its findings have led to the drawing up of a Code of Procedures for trying the numerous complaints against the doctors participating in torture. (Reprinted from the Danish Medical Bulletin, *August 1987)*

FOR us physicians who have had the sad privilege of living for over a decade under totalitarian regimes that practise terror and torture and which, in turn, are supported by multinational expansionist economic interests, there is a pressing need to develop and refine international medical initiatives against torture. For those who govern by applying the National Security Doctrine, torture is a basic was fundamental element. In the words of my Chilean colleague, Dr. Serio Pesutic, there is no better way to defining torture than as *a dehumanised use of power.* Torture is implemented by those who are dominant, especially against those who threaten to undermine submission to their rule.

Torture has a Dante-esque etiology. It is the only man-made disease whose intention is here and now. In it, the first sick factor is neither the victim nor the torture, but rather the society which provides the opportunity and incentive to use torture. In all its degrees and expressions torture is nowadays deeply selective. Those who suffer it are those who are able to organise large crowds of people and who follow their own conscience. Torture tends to damage individuals without causing them to die, rather than obtaining information from them. This has led to the need for physicians to participate in implementing and sophisticating it. Among other things, means are sought to torture without leaving marks in order to make any denouncement lose legal validity, since such complaints are exclusively based on the testimony of the victims which is met with the cynical denials of those responsible in the security services.

Today, we are able to single out these points as the cornerstone of torture in the Third World. This, then, is the time when the figure of the military doctor assumes a central role as protagonist in his functions, his practice, and his aims.

Until the beginning of the early 1970s, the great majority of medical doctors who served the health units of the Uruguayan Armed Forces did so as civilians practising their profession. The Armed Forces Function Act (No. 14,157) along with Article 50 of Decree No. 783/73 ordained that the practice of their rights and the fulfilment of their professional duties be subordinated to military regulation. Likewise, their professional tasks were subordinated to the military authorities in direct opposition to the universal values of medical ethics.

The adoption of the National Security Doctrine meant an ideological purge of the armed forces, since anyone considered a danger to that ideology was dismissed from his post. Undoubtedly, this fact along with the abovementioned decrees make it absolutely valid to say that the military doctors were the medical part of the repressive apparatus which committed innimaginable gross violations of human rights. To many people, such affirmation may seem too simplistic; but here we are not talking about the ordinary man in the street or about those who had no other job opportunity than to enter a military garrison. We are talking rather about physicians trained culturally and scientifically at a free university. This is why we cannot understand that they have collaborated with those who directly oppressed our entire people.

The University of the Republic and the Uruguayan medical profession have been the primary pillars of our social gains for more than 40 years. For these institutions, every medical doctor owes respect and, above all, the doctor's respect is owed to a professional condition that identifies him or her with the health of others. Impositions from the established hierarchies can only alienate them from carrying out their professional duty, resulting in a serious disregard of medical ethics.

Consequently, a military doctor is not released from his ethical responsibilities if he enters service in the armed forces, since this only constitutes a minor addition to his fundamental condition of being human and being a physician—conditions from which he can never be returned. The implementation of an alienating training system with the imposition of a discipline aimed at estranging him from his humanity and his moral conscience as a doctor is impermissible. It is also incompatible with real medical training and with responsibility for the training of other doctors, because for these situations the greatest measure of freedom of conscience is required.

Although this is an affront to medical life in Uruguay, it is an historical fact that certain military doctors participated actively or passively in torture or violated ethical norms they ought to have abided by when carrying out orders from their superiors. In addition, we find a collective responsibility on the part of military doctors for neglecting to issue denouncements when such acts occurred—even today, a year and a half after democracy has been restored. This happens despite the fact that they belong to an institution which unquestionably has implemented measures that violated human rights on such

a wide scale and with so ample evidence that no one could ignore it.

In July 1984, the 7th National Medical Convention took place. On this occasion, public denouncements were reiterated of the systematic torture used against political prisoners as well as the violation of basic human rights on the part of the dictatorial government in Uruguay. Faced with these facts, a National Committee on Medical Ethics was set up. Its task was to study the denouncements and make decisions on them. Moreover, it was to prepare the elaborate a preliminary bill of compulsory medical association membership with its corresponding ethical code. These are long-standing aspirations of the Uruguayan medical profession that even today have not yet been achieved.

As a precedent, there is the decision made by the Uruguayan medical profession on October 27, 1984 to expel Dr. Eduardo Saiz Pedrini. Before that, an extraordinary tribunal set up by the Medical Federation of the Provinces found him guilty of violating the principles of medical ethics of the United Nations by giving perjured evidence in the certification of death and by covering up the torture suffered by Dr. Vladimir Roslik, who died on April 16, 1984, at Fray Bentos Military Garrison.

On March 4, 1985, the National Committee on Medical Ethics commenced functioning. It was made up of physicians representing the Uruguayan Medical Union and the Medical Federation of the Provinces along with the Association of Medical Students; in addition, it included members representing the Uruguayan Bar Association and its Human Rights Committee.

From the outset, and as the denouncements from released political prisoners began to pile up, those who had the honor to be designated members were faced with an incredible range of horrors. The constant factor in them all was that physicians played an active or passive part. There were the doctors who took down data on the prisoner's entrance record. This enabled those who were directly in charge of the torture procedures to know the person's physical or mental weakness or disability, enabling them to act with a maximum of ferocity on those points. There were the doctors who were unconcerned about giving direct care to sick prisoners, who delayed consultations, refused medication and specified diets, etc; the doctor who stepped in when the torture victim's life was at stake, thus succeeding in returning him to consciousness, only to send him back into the torture machine; the doctor who falsified the death cause of prisoners, performing incomplete autopsies or issuing death certificates many times without directly examining the bodies concerned; and the doctors who directly participated in torturing those interrogated or conducted a constant mental harassment of the prisoners, seeking ways to break down their personalities.

In this notes on *Reflexiones Para un Judicio Etico-Medico* (Reflections for an Ethical/Medical Judgment), Dr. Rodolfo Schurmann P., expert in criminal law and member of the National Committee on Medical Ethics, writes: "Many of these practices can be comprised within criminal offenses such as *injuries, abuse against detainees, private violence, covering up,* and *failure to offer medical care.* This does not mean that they are not reproachable from an ethical/professional viewpoint; on the contrary. Taking into account the seriousness of the malpractice, this goes beyond the strictly ethical field and falls into that of criminal law. Thus, two negative judgments can be passed which may coincide in the sentences, but where each is independent. It is true that, as a rule, all criminal acts involve an ethical depreciation, but not all ethical deprecation involves crime. The principle of legality underlying criminal law eliminates in this regard the elasticity or fluctuation of ethical norms *(nullum crimen sine lege).*"

In our country, there has been neither a regular organ specifically for 'trying' unethical conduct nor an applicable code. Thus, the new committee faced the need to study the existing principles for it to act upon:

A *Internationally Approved Principles*

Global:

—The Universal Declartion of Human Rights, 1948.
—The Declaration of Geneva, 1949.
—International Agreement on Civil and Political Rights, 1966.
—Declaration on the Protection of All Persons from Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 1975.

Regional:

—The Pan-American Convention on Human Rights, 1969.

B *National Regulations*

—Act No. 1088 of 1870 (concerning the Army: abolition of flogging and other punishments involving torture).
—Present constitutional precepts in force: Articles 26-72 and 332 of the Magna Charta of 1967.
—Act No. 15737 on Nonreciprocal Amnesty, issued on March 22, 1985.

C *Special Regulations and Codes of Ethics*

—The Declaration on Tokyo, adopted by the 29th World Medical Assembly, 1975.
—Principles of Medical Ethics, United Nations, 1982.

According to Dr. Schurmann, the fundamental guidelines—one could almost say the cornerstone—in the worldwide system of ethical responsibility in this field are those adopted by the United Nations General Assembly on December 18, 1982.

Principle 1

Health personnel, particularly physicians, charged with the medical care of prisoners and detainees have a duty

to provide them with protection of their physical and mental health and treatment of disease of the same quality and standard as is afforded to those who are not imprisoned or detained.

Principle 2

It is gross contravention of medical ethics, as well as an offense under applicable international instruments, for health personnel, particularly physicians, to engage, actively or passively, in acts which constitute pariticipation in, complicity in, incitement to or attempts to commit torture or other cruel, inhuman or degrading treatment or punishment.

This is a clear affirmation of the concepts dealt with stating that *without exception of any kind* the supreme duty of all medical doctors is to prevent and cure disease for the patients who are entrusted to their care and to help them avoid suffering. The specific duty of military or police doctors is to offer the imprisoned persons the same health protection and the same treatment as they would give to nondetainess. Correlatively speaking, their highest duty is not to inflict on the people who are deprived of their liberty any sort of cruel, inhuman, or degrading treatment. By virtue of the profession they exercise, physicians hold unimpeachable duties vis-a-vis mankind which extend beyond considerations of interest in the personal, economic, admnistrative, political, or 'national security' spheres.

Furthermore, it became necessary for the committee to draw up a Code of Procedures for dealing with and trying the numerous denouncements it received. In this manner, the accused physicians will enjoy the widest possible guarantees for their defense and discretion about the alleged offeness.

In each case, at the committee's plenary session, an inquiry team is set up consisting of a physician and professional aspects while the lawyer ensures that the correct procedure is abided by. After studying the case in depth, including a justification from the alleged offender, who has a right to legal advice and may call witnesses, the team writes its final report. Subsequently, this is submitted to the full committee for approval, amendment or rejection. If it is approved, the accused doctor is informed. He is then offered a chance to present an apology; if this is accepted by the full committee, a new trial is stipulated. Should the concerned doctor not wish to respond, the ruling is put on record.

After the ruling is official, the next step is up to the medical doctor's professional associations (*Sindicato Medico del Uruguay* and *Federacion Medica del Interior*). They decide on professional disciplinary sanctions according to the details of each case and bring relevant legal action when necessary.

The National Committee on Medical Ethics has now been functioning for a year and a half, and we can show the world only three verdicts on the participation of physicians in torture, despite the fact that we are looking into more than a hundred specific denouncements.

Today, a year and a half after the democratic government was installed—and despite the official mission of the Uruguayan government, which led the United Nations to lift its sanctions against the country for violations of human rights during the years of dictatorial government—we can show the world only a small total of publicly established violations of human rights despite the fact that the whole nation is convinced that such violations took place; a completely intact army with its intelligence and security systems still in force and constantly pressuring the government's political decisions; a state which has not yet determined whether a civilian or a military court is to be in charge of prosecuting those responsible for the misdeeds of the past; and only one bill of Regulations for the protection of Human Rights, namely No. 433 of December 1985, proposed by Senators *Alberto Zumaran and Hugo Batalla* on behalf of the political opposition parties and which has not yet been dealt with in any depth.

Facing the reality of *obstacles* imposed by the government, we as physicians feel proud of the few, but unbending penalties and denouncements made against those who violated the universal ethical principles while carrying out their functions as military doctors. *Now, once again we turn to the worldwide medical community for solidarity and to propose some joint course of action*:

—A set of rules adopted by medical organisations everywhere which shall be binding for physicians when exercising their profession, for their relationship with the society they live in and with the government they are attached to.

In her study on 'Deontology and Repression' Dr. Susana Eirin, a lawyer and member of the National Committee on Medical Ethics, says that in times of moral decay, when a society enters a crisis, all its members are affected by such "memoral shakeup." Before learning to become a physician, one has to learn to become a human being. It may not be possible to lay down exact guidelines for the behaviour of individuals in an environment that is becoming difficult; but it certainly is important for those who start practising a profession to be given norms of conduct in the face of the social crises which our societies in transition have to endure.

—It is necessary to define and implement universal teaching norms on human ethical and professional standards. In particular, the concept of due obedience, or obedience to superiors, should be defined as restrictively as necessary in order to avoid its use as a justification for any conduct violating human rights.

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Mission to Chile

Report of World Medical Association

andre wynen

Since 1984 the Chilean Medical Association has been actively campaigning against the use of torture and against the physicians who participate in it. In July 1986 during a general protest strike two office holders of the association were arrested and taken to prison. The association invited the secretary general of the World Medical Association to help free them. This is a report of that visit.

DR. J. L. ONZALEZ REUES and Dr. F. Rivas Larrain, president and secretary general of the Chilean Medical Association, were arrested on July 10, 1986 and taken to Capucinos, an annex of the public prison in Santiago. In the last three years, the Chilean Medical Association has been campaigning vigorously against the use of torture and against physicians who participate in it. I had been to Santiago, Chile, in February 1984 to hold a press conference in which I expressed the WMA's full support of the actions taken by the Chilean physicians.

Last year, the Chilean Medical Association joined other professional groups (lawyers, engineers, arthitects, etc.) to create a national civic assembly. Dr. Gonzalez was elected its president. The purpose is to unite all groups opposed to the regime. The Chilean Medical Association's main cause is to defend the rights of the patient and medical ethics, which is directly linked with the defense of human rights.

The National Civic Assembly called a two-day general protest strike (July 2-3), during which violent confrontations between civilians and military patrols led to three deaths and several injuries. Two young demonstrators were seriously burned, their bodie were found near the airport.

The version given by the opposition—based on testimony by witnesses, including that published by the Catholic Church—affirmed that an army patrol had poured gasoline over the victims. On the other hand, the government version stated reports by their witness that the accident had been caused by the victims themselves while handling Molotov cocktails. One of them died from the severe burns received.

Fourteen leaders of the National Civic Assembly—including Dr. Gonzalez and Dr. Rivas—were detained on charges of inciting to riot and violence during the demonstrations.

Alerted by the Chilean Medical Association, the WMA secretary general issued a press release to international press agencies informing them about the situation and sent letters and telegrams to the Chilean government and the judiciary appealing on behalf of the two collegues detained. These measures were taken in concert with Amnesty International and the American Association for the Advancement of Science (AAS), among others. On July 24, the Chilean Medical Association telephoned and asked me to travel to Chile to help them in the effort to free their president and secretary general.

Contacts were made with the Belgian Minister of Foreign affairs and the Chilean ambassador in Brussels to discuss the feasility of an urgent mission to the Chilean government and the judiciary. Several meetings were arranged in Santiago with the help of the Belgian ambassador in that capital. In August, I arrived in Santiago to meet with the Belgian ambassador and with representatives of the Chilean Medical Association, thanks to Dr. Jorge Jimenez de la Jara who assisted and interpreted during my stay in Santiago.

On Sunday, August 3, the first visit to Drs. Gonzalez and Rivas took place and preparations were made for the forth-coming meetings with government authorities and the judiciary. My last day in Chile, August 6, a second visit with the imprisoned colleagues was allowed and prior to my departure for the airport, a press conference was held at the headquarters of the Chilean Medical Association.

I wish to stress that at all times I was received with deference and kindness by all those with whom I met. Perhaps this can be attributed to the fact that I was announced as the representative of more than two million free and independent doctors not connected with any communist country and to the excellent liaison work done by the Belgian Foreign Affairs department, the Belgian ambassador in Santiago, and the Chilean ambassador in Brussels.

In Chile I met with:

—Alberto Cardemil, under-secretary of Internal Affairs, known as the Government's key man in repression activities against the opposition;

—Hugo Rosende, Minister of Justice and personal friend of Dr. L Gonzalez;

—Dr. Winston Chinchon, Minister of Health, and his chief of staff, Dr. Ricardo Caram;

—Rafael Retamal, president of the Supreme Court;

—Judge German Valenzuela Erazo, President of the court in charge of the affair and responsible for the final ruling;

—Professor Amador Neghme, President of the Academy of Medicine;

—Monsignor Sergio Valech, Ausxiliary Bishop, leader of Catholic action in the country.

From these meetings, I gathered that the lawyers had

not petitioned for the prisoners to be released on bail. Therefore, during my meeting with Judge Valenzuela, I officially presented a request for the release of Drs. Gonzalez and Rivas, pledging the moral guarantee and support of the two million physicians represented in the WMA.

I was authorised to inform the Chilean government that in the event these two collegues were convicted, Belgium and I, myself—as well as the University of Louvain, represented by its Rector, Monsignor Massaux—were ready to grant them asylum if their sentence were commuted to exile, which the Chilean government would be willing to consider. If so, the Belgian government would permit them to practise in Belgium during their exile and under the same conditions as Belgian physicians.

Advised of this possibility, Drs. Gonzalez and Rivas were reluctant on account of their solidarity with the 15 other people arrested for the same reasons. Their lawyers, in the meantime, confirmed their intention of requesting, within the next 48 hours, that the prisoners be released on bail.

A meeting was also held with Dr. Alvaro Reyes and Dr. Ramon Rojas who had spent three months in the same prison as Dr. Gonzalez and Dr. Rivas for failing to report to the police a wounded man they had treated at the Chiloe clinic. They had been released on bail the week before. Two other colleagues, Ramiro Olivares and Juan Macaya, are still in prison on the same charges. They work for Vicaria de la Solidaridad, a Catholic Church human rights organistion in Santiago.

I had the opportunity of visiting las Condes private clinic and El Salvador University Hospital, where I was received by Professor Umberto Reyes, Head of the Internal Medicine Service. There is an indescribable contrast between the luxury of the clinic and the meagerness of the hospital, which is so deprived of the most essential equipment and personnel that it has been forced to close some of its departments for lack of resources.

The enormous discrimination between medical care available to the rich and to the poor raises a serious ethical problem and is unquestionably conducive to considerations of euthanasia motivated by a total lack of medical care for the poor.

All physicians encountered, from heads of departments to medical students and residents, unanimously denounced this situation which they consider an unacceptable breach of human rights. They expressed their moral discontent by actively supporting the opposition and by their solidarity with Dr. Gonzalez and Dr. Rivas and the National Civic Assembly they had helped to create and which they diligently direct.

As mentioned, the visit ended with a press conference during which an objective report was presented on what had been done in Santiago. Special emphasis was gives to the total independence and apolitical attitude with which the assignment had been accomplished. The support received in Belgium and the assistance given by Belgian diplomatic circles, the Chilean Medical Association, temporarily presided over by Dr. Acuna, the Chilean Academy of Medicine, the Universities, and the Catholic Church were duly acknowledged and appreciated. Recognition was given to the Chilean authorities and judiciary for their understanding. Obviously, they were impressed by the World Medical Association's moral prestige and the strength it represents. I said that I hoped Chilean justice would take into consideration the detainees' moral and professional values, which no one I met questioned at any time. In conclusion, I would like to note how impressed I was by the enormous contrast in Chile between, on the one hand, the serious government action against the basic principles of medical ethics and human rights—the latter now under review by a commission headed by the department of the interior and a group of jurists and lawyers—and, on the other hand, the great freedom enjoyed by a vigorous opposition press, the freedom of opponents to express themselves against the regime, and the absence of border control mesures.

No entry or exit visa was required, and luggage was not searched at any time. Neither was this an exception because of the special nature of my trip. The rules are identical for all travellers, and this was confirmed by colleagues in the Chilean Medical Association. Nobody was able to explain whether this contrast should be interpreted as a strength or weakness of the government.

On August 19, I was informed that Drs. J. L. Gonzalez and F. Rivas had been released on bail that day and authorised to stay in Chile. Drs. Ramiro Olivares and Juan Macaya were also released for days after my visit to Santiago. The Minister of Health, Dr. Chinchon, was dismissed from his functions in the government a few days after my visit.

Correction

In the June 1988 issue please note the following correction in Health Care, Health Policy and Underdevelopment in India by Ravi Duggal. On page 17 the sentence beginning 'The fact is that Britain's... should read: The fact is that Britain's and USA's state health expenditure was equivalent to India's national income and their health care facilities between 30 to 40 times more than India. This gap is even worse today. In 1984 health expenditure in the USA was $ 1,580 per capita per year out of which state expenditure accounted for 41 per cent.

On page 20, the sentence beginning 'The budget skyrocketed' should read. The budget skyrocketed from a mere Rs 2.2 crore to Rs 25 crore in the third plan.

The title of table 1 should read Growth of Health Infrastructure and Investment in India. The figures in brackets in column 2 refer to private hospitals and in column 5, rural beds

Action Against Doctors Involved in Torture

francisco rivas larrain

In 1982 with the institution of free elections to the Colegio Medico de Chile which was charged with ethical supervision of the profession, there has been much reorganisation and a new code of ethics has been prepared and is implemented vigorously despite opposition from the political authorities.

TORTURE has been practised in Chile systematically and continuously since the coup of 1973. There is sufficient evidence that those responsible for torture in Chile are the security institutions of the armed forces, the police, and the government security agencies: first Direction de Inteligencia Nacional (DINA), followed by Central National de Informaciones (CNI) to the present time. Thousands of cases of torture perpetrated by the above institutions have been documented and denounced by Church and human rights organisations, professional colleges, and international institutions.

In Chile, the armed forces have always included physicians, civilians as well as those with military rank. Until 1973, however, military doctors were shown the same respect as other doctors and were not burdened with the suspicions which are now cast upon them.

During the dictatorship, over 80 physicians directly or indirectly participated in acts of all-treatment, humiliation, or torture; the great majority of these physicians belonged to the armed forces and were attached to the security agencies.

From 1973 to 1982, the officers of Colegio Medico de Chile were appointed by the military authorities. Servile and obedient, these officers heard reports of physicians participating in acts of torture but did nothing to investigate or denounce them.

In 1982, the government enacted a new law on professional colleges, whereby the organisation of more than one college was permitted and authority of the Colegio Medical de Chile for ethical supervision of its members was revoked. Simultaneously, the law allowed free elections to be held in the Coliegio. The pro-Pinochet, prodictatorship position was defeated at these elections, and the officers elected fully represented the opposition.

The Colegio's new authorities set themselves three major lines of action:

(1) Defense and protection of physicians against abuse from the Ministry of Health and optimisation of the Solidarity and Welfare of Departments of the Colegio Medico.

(2) Defence of Chilean public health. Criticism of and mobilisation against those health laws which the government seeks to impose which are arbitratry and elitist, beneficial to higher- income sectors. Report of poor conditions for medical service and near-irreparable deterioration of the Chilean hospital system, which until 1973 was a model of high quality and efficiency.

(3) Struggle to defend, protect, and encourage human, social, and political rights of physicians and all citizens of this country.

This last item has evoked the vigorous, undeviating will of the Colegio Medico to investigate the part played by doctors in all forms of violation of human rights, especially torture.

Since the democratic election of its officers, the General Council of the Colegio Medico has reorganised its Department of Medical Ethics and set up a Human Rights Committee.

From their inception, these departments began to receive reports of the participation of doctors in acts of torture. These reports have been divided into cases where evidence is obtainable and cases which, though undoubtedly true, lack conclusive proof for an investigation. All these reports have been received by the General Council of the Colegio Medico through the regional councils across the country, channelled by the Ethics Department and the Human Rights Committee.

To date, two cases involving four physicians have been investigated and tried; two of the doctors were suspended from the Colegio for one year, the other two were expelled. In addition a trial of another three doctors responsible for the death from torture inflicted by members of the security agencies in a northern city is reaching its final stage.

In the first two cases, the accused were found guilty of negligence in the medical examination of individuals under arrest who were subsequently tortured; various extenuating circumstances were taken into account. In the other two cases, most serious breaches of ethics including negligence in medical examination, wilful omission in reporting lesions, insufficient and unreported treatment of torture victims, issuing false health certificates, together with the absence of extenuating circumstances, deserved the sentence of expulsion from the Colegio Medico.

The above trials were conducted impartially and impeccably by the General Council of the Colegio Medico which is its highest court with renowned counsel acting for the defence of the accused. All counsel, including counsel for the defense of the doctors expelled from the college, agreed that the medical court had shown exemplary fairness and impartiality. Furthermore, not only have the Chilean public opinion and the international

medical community (World Medical Association) acknowledged the same merits, but also the entire body of Chilean physicians have recognised the fair-mindedness of the General Council in dealing out justice and in its generosity towards the culprits.

However, the efforts of the Colegic Medico in this area did not stop there. A new code of ethics was prepared and drafted. At the preliminary meeting held recently in Montevideo to restore the Federation of Medical Associations of Latin America, this code was taken as a model for a continental Code of Medical Ethics.

Our efforts are known beyond our frontiers; we have reported on them before, as we are doing today, with both pride and shame: With pride, because in the midst of cruel dictatorship we have been able to denounce and punish the henchmen of terror and death; with shame, because the men we have tried are physicians, Chilean physicians who had taken the Hippocratic oath and made a commitment to life, not death. Neither is our fight for human rights framed within the bounds of medical ethics. Since we know that we are citizens before being doctors and that human and political rights are best protected in a democracy, we are also involved in the political struggle against the regime.

We say this with pride. The Colegio Medico de Chile penalises physicians who practice torture and strives actively to put an end to Pinochet's dictatorship. We are members of the Asamblee de la Civilidad de Chile, which embodies the 22 most representative social organisations in the country (blue-collar workers, rural workers, slum-dwellers, professional men and women, students, women, university academics, ethnic minorities, and others), and we are part of the plan for progressive civil disobedience designed to put an end to dictatorship. We have been jailed for it, and this we also declare with pride.

In Chile, physicians who practise torture are promoted in the armed forces; we doctors who denounce torture within the military circle of dictatorship are thrown into the jails of Pinochet. Unamuno spoke of peoples with a tragic sense of life. Of men who share this tragic feeling—the feeling that leads a man or a people to folly in the pursuit of freedom. Such folly is ours. To try a torturer under a regime with torture as its policy is folly. To foster civil disobedience under a regime that believes in sterlie order and vertical authoritarianism is further folly. To be jailed under a dictatorship that tortures and murders unhindered is folly, too.

We love such folly. It is the folly of Bolivar, Carrera, Manuel Rodriquez, and Salvador Allende: The sublime, heroic folly that made our peoples free. The heritage that allows us to know we are free and to continue struggling for final liberation of our country. We Chilean physicians know that the solidarity of Danish physicians and physicians all over the world is behind us. That is one of the strongest support in our struggle. We will put an end to torture when we recover democracy. Our victory will be your victory too.

[This presentation was made at the International Meeting on Doctors, Ethics and Torture in Copenhagen by Professor Bent Sorensen on behalf of Dr. Francisco Rivas Larrain, who had been imprisoned by the authorities in Chile on unspecified charges.]

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A cyclostyled list of selected articles in EPW on health and related subjects is available on request.

Press Reports on Human Rights Violations in India

A Tiny Sample Study

ALERT citizen's groups in many places over the world have contributed much to exposing human rights abuses by state organs and to biases in reporting through forming 'media watch' groups. The idea is to carefully scan media reports and, (as somewhat we have done here) classify the data collected. Such scanning also clearly highlights policy biases in reportage by government-controlled or other partisan media.

In order to make a small random study of press-reports on human rights violations, we turned to two files maintained by the Centre for Education and Documentation Bombay, one on police atrocities/encounters/combing operations/brutality and the other on 'civil liberties/democratic rights/infringements/organisations/enquiries etc'. There were no direct reports on specific instances of violation in the second category for the period we looked up: July-September 1988. The first file yielded 32 items from nine major dailies and five magazines. We did an exercise on classifying these reports in two ways i)statewise and ii)by type of human rights violation—an arbitrary but marginally useful exercise.

What we drew from our classification is as follows: 8 reports from Maharashtra (2 from Bombay but most others also from areas nearby), 3 from Orissa, 2 from Bihar and UP and 1 each from Delhi, Gujarat, Karnataka, Nagaland, Punjab, Rajasthan and West Bengal. (4 items were 'repeat' reports not counted here and 3 not clear). Three reports covered the whole country. (Of course, it must be pointed out that at CED we receive more dailies from Bombay than anywhere else. Hence perhaps the large number of instances reported for Maharashtra).

The 'type of human right violation' exercise yielded the following results:

1. Torture/death in lockup	6
2. Police beatings/assault	5
3. Illegal arrests/detention/seizure	4
4. Marauding, terrorisation, oppression of depressed sections	3
5. Direct killing/shooting	2
6. False encounters	3
7. Sexual abuse (including gangrape)	3
8. Framing false charges	2
9. General reports on human rights abuse on state/nation basis.	5

(one report has been counted under both 3 and 7).

Scanning these reports, there seem to be two major categories of 'motives' for these acts. In half the cases, the victims have clearly been earmarked for political repression through the use of violence (and abuse of machinery that is supposedly meant to protect the rights of common citizens). Roughly another half are simply victims of the police machinery blatantly overstepping its brief: either out on a drunken, marauding spree or unleashing calculated brutality against weak, marginalised sections and/or person(s) who have in some way (sometimes unwittingly) exposed the weaknesses in the state machinery.

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(Cont. from page 64)

but were not. He was, however, examined in 1966 and found to be sane. Yet he rotted in jail. In 1981 after news of his detention was published in a newspaper he was once again mentally examined and found to be sane. He was released in 1983 almost 35 years too late.

Like Gomia-Ho there were cases of many other prisoners who were kept in jail as the mental hospitals were full.

In *Charles Sobhraj's* case (1978, 4.SCC.494) the prisoner was kept day and night under bar fetters. The doctor examining the prisoner had noted:

> 09.2.1977: Multiple infected wounds on right ankles. Bar fetters be removed from right leg for 15 days (Sd) Dr. Mittal R.M.O.
>
> 12.2.1977: Bar fetters also to be removed from left foot. (Sd) Dr Bokra.

The supreme court severely restricted the use of bar fetters and condemned their generalised and indiscriminate use. Case of torture in police lock-ups and prisons are routine and endemic. The role of doctors in this is dubious. They are mainly used for cover up purposes.

Appeal to Subscribers/Readers

We regret that the last few issues of the *Radical Journal of Health* have been delayed. This has been because of printing and other difficulties, none of which fortunately are insurmountable. We hope to bring the publication up-to-date in the next couple of months. Please bear with us!

The RJH is for you and is sustained mainly by the support of regular readers like you. So far the journal is being subsidised by donations from concerned individuals. We would not like to pass on the burden of the extra cost to our readers by increasing the subscription rates. The Socialist Health Review Trust, the publisher of RJH has started a campaign for creating a corpus fund which can continue to absorb the extra cost as far as possible.

We appeal to you and your friends to generously contribute to this fund. *All donations may be made payable to the Socialist Health Review Trust and are exempted from Income Tax under Section 80G of the Income Tax Act.*

Torture, Psychiatric Abuse and Health Professionals

r raghav

The Breaking of Bodies and Minds: Torture, Psychiatric Abuse and the Health Professioanals Edited by Eric Stover and Elena Nightingale, The American Association for the Advancement of Science/WH Freeman and Co., New York, 19855; pp 320.

THE book is a result of a symposium sponsored by the Committee on Scientific Freedom and Responsibility (CSFR) of the American Association for Advancement of Science (AAAS) in January 1981 on the subject. Through case history and analysis, the contributors examine the role of health professionals, (HPs) in the use and prevention of torture and psychiatric abuse (TPA) "in the context of the political, social and ethical forces that guide their actions". It addresses itself to such questions as—how and why HPs participate in serious violations of human right; what are the conditions under which such violations occur; and what can organisations of HPs, scientists and others do to check the trend.

As the book notes, "violations of human rights have become so well-organised, so systematic, so efficient, that it is now a kind of industry". Through careful documentation of abuse and lucid insights into the dilemmas of HPs and others working under repressive governments the book presents a clear delineation of the ethical issues involved. In the final chapter, the editors suggest organised monitoring, protest and action through professional associations to counter state-sanctioned routinisation of TPA for political purposes. To quote from the foreward, "It is now more urgent than ever that we use the extraordinary human capacity for learning, communications, and attachment to one another to foster the bonds of mutual respect".

Apart from sporadic misuse of authority or isolated abuses resulting from poor practice/lack of proper resources, TPA as a systematic means of political control are prevalent in at least 66 (nearly one-third) of the world's nations, notes the book. In this, HPs are collaborators in misuse of medicine, mis-certification of victims and other forms of flagrant and deliberate abuse of professional ethics. Alarmingly, "These collaborators in abuse are not simply mad doctors... satisfying their own sadistic desires; they include apparently normal HPs".

Extent definitions of torture are reviewed and their common features noted. In essence, torture is the deliberate infliction of pain by one person on another to break down the will of the victim. The degree of abuse that constitutes 'torture' sometimes needs clarification—for example, solitary confinement, in itself, is not torture under international law. TPA may include physical, psychological and pharmacological and psychiatric abuse forms. However, all torture invariably produces psychological distress in the victim.

Some Testimonies

"I realised that pain can always increase without end. To have that feeling is devasting for the mind. Absolute loneliness and endless time are abstract ideas... but when experiencing them, the desperation is hard to describe".

"The entire affective world... collapses with a kick in the father's genitals, a smack on the mother's face, an obscene insult of the sister, or the sexual violation of a daughter. Suddenly an entire culture based on familial love, devotion, the capacity for mutual sacrifice, collapses. Nothing is possible in such a universe, and that is precisely what the tortures know".

"It is hard to be a survivor. It is hard to remember and tell this story, but I reappeared because people worked... Now I cannot let the others down".

Widespread Prevalence

Apart from its routine employment in war, torture is now being increasingly sanctioned by governments against peacetime 'subversion'. This form of official sanction is often combined with suspension of basic human rights and legal procedures; or else executed through quasi-governmental 'intelligence' groups over which direct government responsibility is disclaimed. Another alarming factor is the emergence of clear military/police training programmes on 'interrogation techniques', such as at the International Police Academy of the Agency for International Development at Washington, DC.

The book mentions cases of torture reported from the Algerian War (French), Vietnam War (by all parties), El Salvador, Guatemala, Indonesia; 'disappearances' and torture are reported from Afghanistan, Argentina, Bolivia, Burundi, Cambodia, Central African Empire, Chile, East Timor, Ethiopia, Iran, Peru, Philippines, Syria and Uganda. References to psychiatric abuse (PA) in Rumania, Uruguay, USA, Japan and USSR (which has been particularly indiated) are included; as well as documented involvement of HPs in abuse in Rome, Japan, Chile, Mauritania, Portugal, Sudan, Iran, Greece, USA and

USSR. Cases of conflict between HPs and governments and the issue of putting to practice codes of medical ethics have been considered from Chile, Uruguay, Brazil and South Africa. The book, however, distinctly focuses on physical abuse in Latin America and psychiatric abuse in USSR... because abuse is particularly widespread, systematic and well-documented in them".

Compiled evidence indicates that the role of HPs may include: Medical examinations at various stages: Attendance at torture sessions to intervene when the victim's life is threatened; treatment and 'patch-up' of injuries; development/refining of torture techniques and sometimes, administration of torture; and false certification of subjects for various reasons.

The participation of HPs in TPA clearly violates three basic tenets of medical ethics: (1) To do more good than harm; (2) To intervene only when the patient is willing and (3) To render treatment regardless of political or other considerations. This disregard of medical ethics cannot be justified in moral terms as serving any higher social purpose, as the book clearly shows through consideration of the commonly applied principles of justice, benevolence and autonomy.

The utilitarian argument for torture sanctions its limited use if it produces more good than evil; such as, say, against terrorists who may destroy hundreds of innocent lives. Such a position is difficult to achieve in practise, as its inefficiency and inefficacy have been regularly remarked up on. The 'good' result is a hypothetical probability, often not realised. More importantly, the applicability of such a rule is not clear. Known terrorists must be tortured. Can we torture their family, friends, neighbours, uncertain acquaintances? Clearly, the good that may be achieved is dwarfed by the evils imposed by a state-sanctioned system, which brutalises many ordinary people wielding some power—army, police, 'intelligence' people; associated medical and legal people, administrators—and corrodes the roots of civilised society.

One argument the book seems to have missed is regarding the context in which such a utilitarian argument is propounded—as a dubious means towards unworthy ends. 'Subversion', 'dissent', 'terrorism', 'war'—these are usually the result of an unsatisfactory political system—and the right thing to address would be the correction of this cause, rather than the sanction of a new evil in support of the one existing.

Research indicates that some torture victims suffer symptoms similar to concentration camp survivors and prisoners of war ((POWs): long-term physical and emotional trauma-heightened anxiety, recurrent nightmares, phobias that sometimes require counseling and treatment. It is also apparent that emotional problems increase on the torture victims emigrating to a new country and culture. Accounts of torture victims remind us that brutality can never be comprehended or measured in the abstract. It is a succession of personal tragedies, disabling to the individuals involved and destructive to humankind.

HPs, employers and other persons who interact with victims of torture need to be aware of and understand the consequences of TPA on the life of victims who will otherwise continue to be victims of misdiagnosis, inappropriate medical and psychiatric care, of preventable job stress and discrimination, of marital and family disruption, and of avoidable suicide.

The book outlines two studies on former torture victims—one covering 44 persons now settled in seven cities of the USA, the other 41 people in Toronto. Standard research protocols for physical and psychological evaluation were established. Those, and other similar studies, indicate a broadly consistent range of after effects in the majority of victims; objective evidence of physical damage in inverse proportion to the period of time elapsed; more widespread long-term psychological disturbances ranging from nervousness to post-traumatic stress disorder. Therefore, many psychologists argue for the establishment of specific diagnostic criteria for a 'torture syndrome'. While this will prevent the overlooking of the psychological difficulties of the victims, other psychologists argue that this might also result in labelling and stigmatisation of victims, particularly those who have come to terms with their experiences.

The book outlines criteria for provision of appropriate psychiatric service—underscoring the importance of rebuilding trust in human values, expunging 'situational guilt', assisting in the victims 'struggle for meaning', and cushioning the effects of rehabilitation into a new society and culture.

Psychiatric Abuse in USSR

Doubtless, PA is employed by intelligence agencies, particularly military, the world over. The book examines in detail the various factors (and the capability of HPs) that have led to the existence of a seemingly institutionalised system in the USSR.

Psychiatric internment for political purposes in Russia started somewhere in the 1930s. It gathered political sanction during the Khruschev period. A series of scandals in the 1970s resulted in worldwide concern and debate, culminating in the bowing out of the Soviet body, the All-union Society, from the World Psychiatric Association (WPA) in January 1983. (The society has recently been re-admitted to the WPA). However, there has been concern that while admitting maladministration of psychiatric care, the USSR has detracted attention from its political misuse, which is probably bound to continue. While many political victims have been freed from psychiatric prisons and there has been an announcement that all other political prisoners would be released from jail (*Indian Post*

October 27 1988, p 1) there is evidence of new cases of internment during the past two years.

Some psychologically healthy dissenters and human rights (HR) activists in the USSR are labelled mentally ill and subject to compulsory hospitalisation and 'treatment'. It is argued that the Soviet approach to psychiatric diagnosis, particularly the concept of schizophrenia, is a critical factor in labelling dissent as mental illness. Such activity is not simply conformance to the prevailing political system by one sympathetic part of the health bureaucracy. It would appear that psychiatric theory and practise have been systematically bent in the USSR for this purpose—a large-scale, cross-cultural WHO study showed that Soviet psychiatrists have a broader concept of schizophrenia and a unique system of categorisation that differs from that of other psychiatrists worldwide. The Sovieztinevsley school which dominates Soviet psychiatry is "... characterised by extremely broad diagnostic criteria, extreme schematism in classification and overwhelming pessimism in prognosis". It postulates that schizophrenia is genetic in origin, irreversible and deep-seated.

The forensic (legal) implications of the Soviet view are also far-reaching. It states that "schizophrenia is a disease in which patients are, with rare exceptions, deemed not responsible (for their behaviour)". Further, with the extremely broad conception of the disease, it is possible that the defendant, who is normal on examination, is still harbouring severe illness.

State-sanctioned torture can become a malignancy of the body-politic. The political system, professional group, public opinion and individual values—these establish norms of conduct, and normally these norms do not conflict. The fact that professionals face dilemmas when conflict occurs underscores the importance of developing ethical standards. An epidemiolocal approach, such as exists in the form of a national network in the US to study the social 'causation' and medico-social implications of murder, is suggested.

Since the people who stand to benefit from TPA are usually those in political positions to sustain it; preventive strategies must be aimed at those in power. Protection of human right is based on three methods: pressure by the international community; actions by national judicial system; and enforcement by international or regional bodies (such as the UNHCR).

Governments bear the 'shame of exposure'. Systematic collection of information by national groups is important. The International Committee of the Red Cross (ICRC) has probably the most detailed information worldwide; visiting prisoners worldwide to check on detention conditions as specified in the Geneva Convention. The International Medical Commission for Health in Human Rights (Geneva) could probably coordinate a data network on epidemiology, suggest the editors in their concluding chapter.

Research on how and why reasonably normal people get co-opted into perverse practises is also important. R.J. Lifton has suggested that one of the key concepts underlying Nazi medical killings was belief in the legitimacy of destroying 'life unworthy of life'. Lifton suggests that the Auschwitz doctors sometimes experienced ethical conflicts but were able to resolve them through a process of 'doubling'—creating an 'Auschwitz self' as well as a humance-husband father self—even as they killed, they held on to the idea that they were healers.

Medicine has become part of society's explicit political response to the general predicament of humans. Medicine is now an institutionalised social instrument employed for the general political purposes of the community—regulating birth and mortality rates, controlling epidemics, etc. In the circumstances, HPs have a positive duty to protect its ethical tenets. As the book states—we are now technically capable of treating bodies and minds effectively on a large scale. To put Orwell's fears of 1984 behind us, we must put medical ethics and internationally defined human right in front of us.

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(Cont. from page 67)

Concerning the erroneous demand of 'loyalty', in *Rafael Bielsa's* book *La funcion publica*, (Ed, Depalma, Buenos Aires, 1960, p. 34.) (Public duties) we read as follows: "The meaning of collaborating in public administration is not that of a partnership where everything must be accepted and legitimised. On the country, it implies checking, revision, objections, observations, and even well-founded opposition to any illegal or inappropriate act contrary to public interest." All professions should have a certain autonomy enabling them to resist pressures from the political systems in which they operate.

Finally, let us be united in our intentions and as physicians recall this statement from the Declaration of Geneva: "I will maintain the utmost respect for human life from its beginning even under threat and I will not use my medical knowledge contrary to the laws of humanity."

Let this be poignantly rooted in our consitences so that society and all its institutions and organs can not accept the practice of torture in their midst ever to happen again. Likewise, let it no longer be allowed that physicians alienated from their medical standards act as unconscious robots for the military in prower. *Let us under no circumstances whatsoever permit the existence of statutes, enclaves, or hierarchies that engender posibilities for such barbarity.*

Human Rights Ethical Codes and Declarations

A. Statements by Professional Associations

(i) The World Medical Association (WMA)

Resolution on Physician Participation in Capital Punishment

Following concern about the introduction of an execution method (lethal injection) which threatened to involve doctors directly in the process of execution, the WMA Secretary-General issued a press statement opposing any involvement of doctors in capital punishment. The 34th Assembly of the WMA, meeting in Libson some weeks after the issuing of the press statement, endorsed the Secretary-General's statement in the following terms:

Resolved, that the Assembly of the World Medical Association endorses the action of the Secretary General in issuing the attached press release on behalf of the World Medical Association condemning physician participation in capital punishment.

Further resolved, that it is unethical for physicians to participate in capital punishment, although this does not preclude physicians certifying death.

Further resolved, that the Medical Ethics Committee keep this matter under active consideration.

Secretary General's Press Release

The first capital punishment by intravenous injection of lethal dose of drugs was decided to be carried out next week by the court of the state of Oklahoma, USA.

Regardless of the method of capital punishment a state imposes, no physician should be required to be an active participant. Physicians are dedicated to preserving life.

Acting as an executioner is not the practice of medicine and physician services are not required to carry out capital punishment even if the methodology utilizes pharmacological agents or equipment that might otherwise be used in the practice of medicine.

A physician's only role would be to certify death once the State had carried out the capital punishment.

September 11, 1981

Regulations in Time of Armed Conflict

These regulations or guidelines set out the WMA's standards on the medical ethical position of the physician during a period of war or other armed conflict. The statement was approved by the 10th World Medical Assembly in Havana in 1956, was edited by the 11th Assembly meeting in Istanbul the following year and was amended by the 35th World Medical Assembly in 1983.

The ameded text reads as follows:

1. Medical ethics in time of armed conflict is identical to medical ethics in time of peace, as established in the International Code of Medical Ethics of the World Medical Association. The primary obligation of the physician is his professional duty; in performing his professional duty, the physician's supreme guide is his conscience.

2. The primary task of the medical profession is to preserve health and save life. Hence it is deemed unethical for physicians to:

A. Give advice or perform prophylactic, diagnostic or therapeutic procedures that are not justifiable in the patient's interest.
B. Weaken the physical or mental strength of a human being without therapeutic justification.
C. Employ scientific knowledge to imperil health or destroy life.

3. Human experimentation in time of armed conflict is governed by the same code as in time of peace; it is strictly forbidden on all persons deprived of their liberty, especially civilian and military prisoners and the population of occupied countries.

4. In emergencies, the physician must always give the required care impartially and without consideration of sex, race, nationality, religion, political affiliation or any other similar criterion. Such medical assistance must be continued for as long as necessary and practicable.

5. Medical confidentiality must be preserved by the physician in the practice of his profession.

6. Privileges and facilities afforded the physician must never be used for other than professional purposes.

Rules governing the care of sick and wounded, particularly in time of conflict

A. 1. Under all circumstances, every person, military or civilian must receive promptly the care he needs without consideration of sex, race, nationality, religion, political affiliation or any other similar criterion.
2. Any emergencies, physicians and associated medical personnel are required to render immediate service to the best of their ability. No distinction shall be made between patients except those justified by medical urgency.

B. 1. In emergencies, physicians and associated medical personnel are required to render immediate service to the best of their ability. No distinction shall be made between patients except those justified by medical urgency.
2. The members of medical and auxiliary professions must be granted the protection needed to carry out their professional activities freely. The assistance necessary should be given to them in fulfilling their responsibilities. Free passage should be granted whenever their assistance is required. They should be afforded complete professional independence.
3. The fulfillment of medical duties and responsibilities shall in no circumstances be considered an offence. The physician must never be prosecuted for observing professional secrecy. In fulfilling their professional duties, the medical and auxiliary professions will be identified by the distinctive emblem of a red serpent and staff on a white field. The use of this emblem is governed by special regulation.

Declaration of Tokyo

The Declaration of Tokyo has, since its adoption in 1975, been the most comprehensive statement produced by the medical profession on the question of the torture and cruel, inhuman or degrading treatment of detainees. It was adopted by the 29th World Medical Assembly, Tokyo, Japan.

The rest is as follows:

It is the privilege of the medical doctor to practise medicine in the service of humanity, to preserve and restore bodily and mental health without distinction as to persons, to comfort and to ease the suffering of his on her patients. The utmost respect for human life is to be maintained even under threat, and no use made of any medical knowledge contrary to the laws of humanity.

For the purpose of this Declaration, torture is defined as the deliberate, systematic or wanton infliction of physical or mental suffering by one or more persons acting alone or on the orders of any authority, to force another person to yield information, to make a confession, or for any other reason.

1. The doctor shall not countenance, condone or participate in the practice of torture or other forms of cruel, inhuman or degrading procedures, whatever the offence of which the victim of such procedures is suspected, accused or guilty, and whatever the victim's beliefs or motives, and in all situations, including armed conflict and civil strife.

2. The doctor shall not provide any premises, instruments, substances or knowledge to facilitate the practice of torture or other

forms of cruel, inhuman or degrading treatment or to diminish the ability of the victim to resist such treatment.

3. The doctor shall not be present during any procedure during which torture or other forms of cruel, inhuman or degrading treatment is used or threatened.

4. A doctor must have complete clinical independence in deciding upon the care of a person for whom he or she is medically responsible. The doctor's fundamental role is to alleviate the distress of his or her fellow men, and no motive whether presonal, collective or political shall prevail against this higher purpose.

5. Where a prisoner refuses nourishment and is considered by the doctor as capable of forming an unimpaired and rational judgment concerning the consequences of such a voluntary refusal of nourishment, he or she shall not be fed artificially. The decision as to the capacity of the prisoner to form such a judgment should be confirmed by at least one other independent doctor. The consequences of the refusal of nourishment shall be explained by the doctor to the prisoner.

6. The World Medical Association will support, and should encourage the international community, the national medical associations and fellow doctors, to support the doctor and his or her family in the face of threats or reprisals resulting from a refusal to condone the use of torture or other forms of cruel, inhuman or degrading treatment.

(ii) World Psychiatric Association (WPA)

Declaration of Hawaii

In early 1976 work commenced on the drafting of an international code of thics for psychiatrists which was subsequently adopted in 1977 at the VI World Congress of Psychiatry in Honolulu, Hawaii. At the same meeting the WPA committed itself to receive and investigate allegations of the abuse of psychiatry for political purposes; in 1979 the establishment of the Review Committee was finalised and it first met in Paris in February 1980.

The constitutional status of the Review Committee was changed at the VII Congress in Vienna in July 1983 when it was made permanent and had its remit widened.

Minor amendments to the text of the Declaration were agreed at the July 1983 Congress. The text, as amended, reads as follows:

Ever since the dawn of culture, ethics has been an essential part of the healing art. It is the view of the World Psychiatric Association that due to conflicting loyalties and expectations of both physicians and patients in contemporary society and the delicate nature of the therapist-patient relationship, high ethical standards are especially important for those involved in the science and practice of psychiarty as a medical specialty. These guidelines have been delineated in order to promote close adherence to those standards and to prevent misuse of psychiatric concepts, knowledge and technology.

Since the psychiatrist is a member of society as well as a practitioner of medicine, he or she must consider the ethical implications specific to psychiatry as well as ethical demands on all physicians and the social responsibility of every man and woman.

Even though ethical behaviour is based on the individual psychiatrist's conscience and personal judgment, written guidelines are needed to clarify the profession's ethical implications.

Therefore, the General Assembly of the World Psychiatric Association has approved these ethical guidelines for psychiatrists, having in mind the great differences in cultural background, and in legal, social and economic conditions which exist in the various countries of the world. It should be understod that the World Psychiatric Association views these guidelines to be requirements for ethical standards of the psychiatric profession.

1. The aim of psychiatry is to treat mental illness and to promote mental health. To the best of his or her ability, consistent with accepted scientific knowledge and ethical principles, the psychiatrist shall serve the best interests of the patient and be also concerned for the common good and a just allocation of health resources. To fulfil these aims requires continuous research and continual education of health care personnel, patients and the public.

2. Every psychiatrist should offer to the patient the best available therapy to his knowledge and if accepted must treat him or her with the solicitude and respect due to the dignity of all human beings. When the psychiatrist is responsible for treatment given by others he owes them competent supervision and education. Whenever there is a need, or whenever a reasonable request is forthcoming from the patient, the psychiatrist should seek the help of another colleague.

3. The psychiatrist aspires for a therapeutic relationship that is founded on mutual agreement. At its optimum it requires trust, confidentiality, co-operation and mutual responsibility. Such a relationship may not be possible to establish with some patients. In that case, contact should be established with a relative or other person close to the patient. If and when a relationship is established for purposes other than therapeutic such as in forensic psychiatry, its nature must be thoroughly explained to the person concerned.

4. The psychiatrist should inform the patient of the nature of the condition, therapeutic procedures, including possible alternatives, and of the possible outcome. This information must be offered in a considerate way and the patient must be given the opportunity to choose between appropriate and available methods.

5. No procedure shall be performed nor treatment given against or independent of a patient's own will, unless, because of mental illness, the patient cannot form a judgement as to what is in his or her best interest and without which treatment serious impairment is likely to occur to the patient or others.

6. As soon as the conditions for compulsory treatment no longer apply, the psychiatrist should release the patient from the compulsory nature of the treatment and if further therapy is necessary should obtain voluntary consent. The psychiatrist should inform the patient and/or relatives or meaningful others, of the existence of mechanisms of appeal for the detention and for any other complains related to his or her well-being.

7. The psychiatrist must never use his professional possibilities to violate the dignity or human rights of any individual or group and should never let inappropriate personal desires, feelings, prejudices or beliefs interfere with the treatment. The psychiatrist must on no account utilize the tools of his profession, once the absence of psychiatric illness has been established. If a patient or some third party demands actions contrary to scientific knowledge or ethical principles the psychiatrist must refuse to cooperate.

8. Whatever the psychiatrist has been told by the patient, or has noted during examination or treatment, must be kept confidential unless the patient relieves the psychiatrist from this obligation, or to prevent serious harm to self or others makes disclosure necessary. In these cases, however, the patient should be informed of the breach of confidentiality.

9. To increase and propagate psychiatric knowledge and skill requires participation of the patients. Informed consent must, however, be obtained before presenting a patient to a class and, if possible, also when a case-history is released for scientific publication, whereby all reasonable measures must be taken to preserve the dignity and anonymity of the patient and to safeguard the personal reputation of the subject. The patient's participation must be voluntary, after full information has been given of the aim, procedures, risks and inconveniences of a research project and there must always be a reasonable relationship between calculated risks or inconveniences and the benefit of the study. In clinical research every subject must retain and exert all his rights as a patient. For children and other patients who cannot themselves given informed consent, this should be obtained from the legal next of kin. Every patient or research subject is free to withdraw for any reason at any time from any voluntary treatment and from any teaching or research programme in which he or she participates. This withdrawal, as well as any refusal to enter a programme, must never influence the

psychiatrist's efforts to help the patient or subject.

10. The psychiatrist should stop all therapeutic, teaching or research programmes that may evolve contrary to the principles of this Declaration.

(iii) The International Council of Nurses (ICN)

Role of Nurse in Care of Detainees and Prisoners

At the meeting of the Council of National Representatives of the International Council of Nurses in Singapore in August 1975, the following statement was adopted:

Whereas the ICN Code for Nurses specifically states that:

1. "The fundamental responsibility of the nurse is fourfold: to promote health, to prevent illness, to restore health and to alleviate suffering.
2. "The nurse's primary responsibility is to those people who require nursing care.
3. "The nurse when acting in a professional capacity should at all times maintain standards of personal conduct which reflect credit upon the profession.
4. "The nurse takes appropriate action to safeguard the individual when his care is endangered by a co-worker or any other persons;"

and

WHEREAS in 1973 ICN reaffirmed support for the Red Cross Rights and Duties of Nurses under the Geneva Conventions of 1949, which specifically state that, in case of armed conflict of international as well as national character (i.e. internal disorders, civil wars, armed rebellions):

1. Members of the armed forces, prisoners and persons taking no active part in the hostilities

(a) Shall be entitled to protection and care if wounded or sick,
(b) Shall be treated humanely, that is:
— they may not be subjected to physical mutilation, or to medical or scientific experiments of any kind which are not justified by the medical, dental or hospital treatment of the prisoner concerned and carried out in his interest,
— they shall not be wilfully left without medical assistance and care, nor shall conditions exposing them to contagion or infection be created,
— they shall be treated humanely and cared for by the Party in conflict in whose power they may be, without adverse in conflict in whose power they may be, without adverse distinction founded on sex, nationality, religion, political opinion, or any other similar criteria.

2. The following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above mentioned persons:

(a) violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and torture;
(b) outrages upon personal dignity, in particular humiliating and degrading treatment.

WHEREAS in 1971 ICN endorsed the United Nations Universal Declaration of Human Rights and, hence, accepted that:

1. "Everyone is entitled to all the rights and freedoms, set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status (Art.2),
2. "No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment (Art.5)"; and

WHEREAS in relation to detainees and prisoners of conscience, interrogation procedures are increasingly being employed which result in ill effects, often permanent, on the person's mental and physical health;

THEREFORE BE IT RESOLVED that ICN condemns the use of all such procedures harmful to the mental and physical health of prisoners and detainees; and

FURTHER BE IT RESOLVED that nurses having knowledge of physical or mental ill-treatment of detainess and prisoners take appropriate action including reporting the matter to appropriate national and/or international bodies; and

FURTHER BE IT RESOLVED that nurses participate in clinical research out on prisoners, only if the freely given consent of the patient has been secured after a complete explanation and understanding by the patient of the nature and risk of the research; and

FINALLY BE IT RESOLVED that the nurse's first responsibility is towards her patients, notwithstanding considerations of national security and interest.

Nurse's Role in Safeguarding Human Rights

Responding to requests from national member associations for guidance on the protection of human rights of both nurses and those for whom they care, the Council of National Representatives of the International Council of Nurses adopted the statement given below at its meeting in Brasilia in June 1983.

This document has been developed in response to the requests of national nurses assosiations for guidance is assisting nurses to safegurads their own human rights and those for whom they have professional responsibility. It is meant to be used in conjunction with the ICN Code for Nurses and resolution relevant to human rights. Nurses should also be familiar with the Geneva Conventions and the additional protocols as they relate to the responsibilities of nurses.

The current world situation is such that there are innumerable circumstances in which a nurse may become involved that require action on her/his part to safeguard human rights. Nurses are accountable for their own professional actions and must therefore be clear as to what is expected of them in such situations.

Also conflict situations have increased in number and often include internal political upheaval, and strife, or international war. The nature of war is changing. Increasingly nurses find themselves having to act or respond in complex situations to which there seems to be no clear cut solution.

Changes in the field of communications also have increased the awareness and sensitivity of all groups to those conflict situations.

The need for nursing actions to safeguard human rights is not restricted to times of political upheaval and war. It can also arise in prisons or in the normal work situation of any nurse where abuse of patients, nurses, or others is witnessed or suspected. Nurses have a responsibility in each of these situations to take action to safeguard the rights of those involved. Physical abuse and mental abuse are equally of concern to the nurse. Over or under treatment is another area to watched. There may be pressures applied to use one's knowledge and skills in ways that are not beneficial to patients or others.

Scientific discoveries have brought about more sophisticated forms of torture and methods of resuscitation so that those being tortured can be kept alive for repeated sessions. It is in such circumstances that nurses must be clear about what actions they must take as in no way can they participate in such torture, or torture techniques.

Nurses have individual responsibility but often they can be more effective if they approach human rights issues as a group. The national nurses associations need to ensure that their structure provides a realistic mechanism through which nurses can seek confidential advice, counsel, support and assistance in dealing with these difficult situations. Verification of the facts reported will be an important first step in any particular situation.

At times it will be appropriate for the NNA to become a spokesman for the nurses involved. They may also be required to negotiate for them. It is *essential* that confidentality be maintained. In rare cases the personal judgment of the nurse may be such that other actions seem more appropriate than approaching the association.

The nurse initiating the actions requires knowledge of her own and other's human rights, moral courage, a well thought through plan of action and commitment and determination to see that the

ncessary follow-up does occur. Personal risk is a factor that has to be considered and each person must be use her/his best judgment in the situation.

Rights of Those in Need of Care

Health care is a right of all individuals. Everyone should have access to health care regardless of financial, political, geographic, racial or religious considerations. The nurse should seek to ensure such impartial treatment.

Nurses must ensure that adequate treatment is provided—within available resources—and in accord with nursing ethics (ICN Code) to all those in need of care.

A patient/prisoner has the right to refuse to eat or to refuse treatments. The nurse may need to verify that the patient/prisoner understands the implications of such action but she should not participate in the administration of food or medications to such patients.

Rights and Duties of Nurses

When considering the rights and duties of nursing personnel it needs to be remembered that both action and lack of action can have a detrimental effect and the nursing personnel must be considered accountable on both counts.

Nurses have a right to practise within the code of ethics and nursing legislation of the country in which they practice. Personal safety—freedom from abuse, threat or intimation—are the rights of every nurse.

National nurses assosiations have a responsibility to participate in development of health and social legislation relative to patient's rights and all related topics.

It *is a duty* to have informed consent of patients relative to having research done on them and in receiving treatments such as blood transfusions, anesthesia, grafts etc. Such informed consent is a patient's right and must be ensured.

(iv) Psychologist:

Statement by International Union of Psychological Science

In July 1976, the Assembly of the International Union of Psychological Science unanimously approved the statement of the Executive Committee of the International Union of Psychological Science made in July 1974.

The text is as follows:

The International Union of Psychological Science

which includes national psychological societies of 42 nations from all over the world;

which thus speaks in the name of over 70,000 professional psychologists who, because the subject of their science is behaviour, are particularly concerned with any acts by which individuals in a systematic and deliberate way infringe upon the inviolable rights of human beings, regardless of race, religion on ideology, these rights being guaranteed by the Charter of the United Nations;

and which is concerned with strict observance of professional standards of ethics in the practice of psychology,

therefore makes the following declarations:

It proclaims that no psychologist, in the exercise of his or her professional functions, should accept instructions or motivations that are inspired by considerations that are foreign to the profession; It protests solemnly against any use of scientific data or of professional methods of psychology that impair the above-mentioned rights;

It formally condemns any collaboration by psychologists—whether actively or passively, directly or indirectly—with the above-mentioned aubses, and it urges its members to oppose any abuses of this sort;

It requests each member-society to make certain that it has enacted a code of ethics and to take those actions required by its code against any member guilty of such abuses against human rights; It declares that the Executive Committee of IPUS is ready to support, with all means at its disposal, any action undertaken by a member-society in order to carry out the terms of the present resolution; It recalls the following statement made by its Executive Committee on July 27 1974: "The Executive Committee wishes to make clear that the International Union of Psychological Science denounces vigorously all practices that are contrary to the high level of morality that must regulate the scientific and professional roles assumed by psychologists in modern society."

It welcomes the United Nation's Resolution, adopted by the General Assembly (Third Committee: A/10408; 243rd plenary meeting, December 9, 1975) on the Protection of All Persons from being subjected to Inhuman Treatment.

B. United Nations Declarations and Codes Principles of Medical Ethics

The principles are elaborated within the text of Resolution 37/194 adopted by the United Nations General Assembly, 18 December 1982.

The General Assembly...

Desirous of setting further standards in this field which ought to be implemented by health personnel, particularly physicians, and by government officials,

1. ADOPTS the Principles of Medical Ethics relevant to the role of health personnel, particularly physicians, in the protection of prisoners and detainees against torture and other cruel, inhuman or degrading treatment on punishment set forth in the annex to the present resolution;
2. CALLS UPON all governments to give the Principles of Medical Ethics, together with the present resolution, the widest possible distribution, in particular among medical and paramedical associations and institutions of detention or imprisonment in an official language of the State;
3. INVITES all relevant inter-governmental organisations, in particular the World Health Organisation, and non-governmental organisations concerned to bring the Principles of Medical Ethics to the attention of the widest possible group of individuals, especially those active in the medical and paramedical field.

Principles of Medical Ethics Relevant to Role of Health Personnel, Particularly Physicians, in Protection of Prisoners and Detainees Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment

Principle 1

Health personnel, particularly physicians, charged with the medical care of prisoners and detainees have a duty to provide them with protection of their physical and mental health and treatment of disease of the same quality and standard as is afforded to those who are not imprisoned or detained.

Principle 2

It is a gross contravention of medical ethics, as well as an offence under applicable international instruments, for health personnel, particularly physicians, to engage, actively or passively, in acts which constitute participation in, complicity in, incitement to or attempts to commit torture or other cruel, inhuman or degrading treatment or punishment.[1]

Principle 3

It is a contravention of medical ethics for health personnel, particularly physicians, to be involved in any professional relationship with prisoners or detainees the purpose of which is not solely to evaluate, protect or improve their physical and mental health.

Principle 4

It is a contravention of medical ethics for health personnel, particularly physicians:

a) to apply their knowledge and skills in order to assist in the interrogation of prisoners and detainees in a manner that may adversely affect the physical or mental health or condition of such prisoners or detainees and which is not in accordance with the relevant international instruments;[2]

b) To certify, or to participate in the certification of, the fitness of prisoners or detainees for any form of treatment or punishment that may adversely affect their physical or mental health and which is not in accordance with the relevant international instruments, or to participate in any way in the infliction of any such treatment or punishment which is not in accordance with the relevant international instruments.

Principle 5

It is a contravention of medical ethics for health personnel, particularly physicians, to participate in any procedure for restraining a prisoner or detainee unless such a procedure is determined in accordance with purely medical criteria as being necessary for the protection of the physical or mental health or the safety of the prisoner or detainee himself, or his fellow prisoners or detainees, or of his guardians, and present no hazard to his physical or mental health.

Principle 6

There may be no derogation from the foregoing principles on any grounds whatsoever, including public emergency.

Notes

1) See the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman on Degrading Treatment or Punishment (General Assembly Resolution 3452 (XXX), annex), article 1 of which states:

1."For the purpose of this declaration, torture means any act by which severe pain or suffering, whether physical or mental, is internationally inflicted by or at the instigation of a public official on a person for such purposes as obtaining from him on a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or other persons. It does not include pain or suffering arising only from, inherent in or incidental to, lawful sanctions to the extent consistent with the Standard Minimum Rules for the Treatment of Prisoners.

2. "Torture constitutes an aggravated and deliberate form of cruel, inhuman or degrading treatment or punishment."

Article 7 of the Declaration States:

"Each State shall ensure that all acts of torture as defined in article 1 are offences under its criminal law. The sale shall apply in regard to acts which constitute participation in, complicity in, incitement to or an attempt to commit torture."

2) Particularly the Universal Declaration of Human Rights (General Assembly resolution 217 A (III), the International Convenants on Human Rights (General Assembly resolution 2200 A (XXI), annex), the Declaration on the Protection of all Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (General Assembly resolution 3452 (XXX), annex) and the Standard Minimum Rules for the Treatment of Prisoners (First United Nations Congress on the Prevention of Crime and the Treatment of Offenders: report by the Secretariat (United Nations publication, Sales No. 1956, IV.4), annex I.A).

C. Amnesty International Declarations

Declaration on Participation of Doctors in Death Penalty 1981

Amnesty International,

Recalling

that the spirit of the Hippocratic Oath enjoins doctors to practise for the good of their patients and never to do harm,

Considering

that the Declaration of Tokyo of the World Medical Association provides that "the utmost respect for human life is to be maintained even under threat, and no use made of any medical knowledge contrary to the laws of humanity",

Further Considering That

the same Declaration forbids the participation of doctors in torture or other cruel, inhuman or degrading treatments,

Noting

the the United Nations Secretariat has stated that the death penalty violates the right to life and that it constitutes cruel, inhuman or degrading treatment,

Mindful

that doctors can be called on to participate in executions by, *inter alia*,

—determining mental and physical fitness for execution,

—giving technical advice,

—prescribing, preparing, administering and supervising doses of poison in jurisdictions where this method is used,

—making medical examinations during executions, so that an execution can continue if the prisoner is not yet dead,

Declares

that the participation of doctors in executions is a violation of medical ethics;

Calls Upon

medical doctors not to participate in executions;

Further Calls Upon

medical organisations to protect doctors who refuse to participate in executions, and to adopt resolutions to these ends.

This declaration was formulated by the Medical Advisory Board of Amnesty International and was adopted by Amnesty International's International Executive Committee on March 12, 1981.

Conference on Abolition of Death Penalty Declaration of Stockholm

The Stockholm Conference on the Abolition of the Death Penalty, composed of more than 200 delegates and participants from Africa, Asia, Europe, the Middle East, North and South America and the Caribbean region,

Recalls That:

The death penalty is the ultimate cruel, inhuman and degrading punishment and violates the right to life.

Considers that:

—The death penalty is frequently used as an instrument of repression against opposition, racial, ethnic religious and underprivileged groups,

—Execution is an act of violence, and violence tends to provoke violence,

—The imposition and infliction of the death penalty is brutalising to all who are involved in the process,

—The death penalty has never been shown to have a special deterrent effect,

—The death penalty is increasingly taking the form of unexplained disappearances, extra-judicial executions and political murders,

—Execution is irrevocable and can be inflicted on the innocent.

Affirms that:

—It is the duty of the state to protect the life of all persons within its jurisdiction without exception,

—Executions for the purposes of political coercion, whether by government agencies or others, are equally unacceptable,

—Abolition of the death penalty is imperative for the achievement of declared international standards.

Declares:

—Its total and unconditional opposition to the death penalty,

—Its condemnation of all executions, in whatever form, committed or condoned by government,

—Its commitment to work for the universal abolition of the death penalty.

Calls upon:

—Non-governmental organisations, both national and international, to work collectively and individually to provide public information materials directed towards the abolition of the death penalty,

—All governments to bring about the immediate and total abolition of the death penalty,

—The United Nations unambiguously to declare that the death penalty is contrary to internatioinal law.

Why don't you write for us ?

This periodical is a collective effort of many individuals active or interested in the field of health or interested in health issues. The chief aim of the journal is to provide a forum for exchange of ideas and for generating a debate on practical and theoretical issues in health from a **radical or Marxist** perspective. We believe that only through such interaction can a coherent radical and marxist critique of health and health care be evolved.

Each issue of the journal highlights one theme, but it also publishes (i) Discussions on articles published in earlier issues (ii) Commentaries, reports, shorter contributions outside the main theme.

Our forthcoming issues will focus on : Medical Technology, Agricultural Development and Health, Health in People's Movements.

If you wish to write on any of these issues do let us know immediately. We have to work three months ahead of the date of publication which means that the issue on Medical Technology is already being worked on. A full length article should not exceed 6,000 words and the number of references in the article should not exceed 50. Unless otherwise stated author's names in the case of joint authorship will be printed in alphabetical order. You will appreciate that we have a broad editorial policy on the basis of which articles will be accepted.

We have an author's style-sheet and will send it to you on request. Please note that the spellings and referencing of reprint articles are as in the original and are NOT as per our style

We would also like to receive shorter articles, commentaries, views or reports. This need not be on the themes we have mentioned. These articles should not exceed 2,000 words. Please do write and tell us what you think of this issue.

All articles should be sent in duplicate. They should be neatly typed in double spacing on one side of the sheet. This is necessary because we do not have office facilities here and the press requires all material to be typed. But if it is impossible for you to get the material typed, do not let it stop you from sending us your contributions in **a neat handwriting** on one side of the paper. Send us two copies of the article written in a legible handwriting with words and sentences liberally spaced.

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Declaration Against Torture

The Declaration on the Protection of all Persons from Torture and other Cruel, Inhuman or Degrading Treatment or Punishment (Declaration against Torture) was adopted without a vote by the United Nations General Assembly on 9 December 1975. It calls upon states to take effective measures to prevent torture and lists some of the most important safeguards and remedies to be provided. It is one of the most important international documents on torture.

Declaration on Protection of All Persons From Torture and Other Cruel, inhuman or Degrading Treatment or Punishment

The United Nations General Assembly adopted on December 9, 1975 a declaration condemning any act of torture or other cruel, inhuman or degrading treatment as "an offence to human dignity". Under its terms, no state may permit or tolerate torture or other inhuman or degrading treatment, and each state is requested to take effective measures to prevent such treatment from being practised within its jurisdiction.

The Declaration was first adopted and referred to the Assembly by the Fifth United Nations Congress on the Prevention of Crime and Treatment of Offenders, held in Geneva in September 1975. In adopting the Declaration without a vote, the Assembly noted that the Universal Declaration of Human Rights and the International Covenant on Civil Political Rights provide that no one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

The Assembly has recommended that the Declaration serve as a guideline for all states and other entities exercising effective power.

The text of the Declaration follows:

Article 1

1. For the purpose of this Declaration, torture means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted by or at the instigation of a public official on a person for such purposes as obtaining from him or a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or other persons. It does not include pain or suffering arising only from, inherent in or incidental to, lawful sanctions to teh extent consistent with the Standard Minimum Rules for the Treatment of Prisoners.

2. Torture constitutes an aggravated and deliberate form of cruel, inhuman or degrading treatment or punishment.

Article 2

Any act of torture or other cruel, inhuman or degrading treatment or punishment is an offence to human dignity and shall be condemned as a denial of the purposes of the Charter of the United Nations and as a violation of the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights.

Article 3

No state may permit or tolerate torture or other cruel, inhuman or degrading treatment or punishment. Exceptional circumstances such as a state of war or a threat of war, internal political instability or any other public emergency may not be invoked as a justification of torture or other cruel, inhuman or degrading treatment or punishment.

Article 4

Each State shall, in accordance with the provisions of this Declaration, take effective measures to prevent torture and other cruel, inhuman or degrading treatment or punishment from being practised within its jurisdiction.

Article 5

The training of law enforcement personnel and of other public officials who may be responsible for persons deprived of their liberty shall ensure that full account is taken of the prohibition against torture and other cruel, inhuman or degrading treatment or punishment. This prohibition shall also, where appropriate, be included in such general rules or instructions as are issued in regard to the duties and functions of anyone who may be involved in the custody or treatment of such persons.

Article 6

Each state shall keep under systematic review interrogation methods and practices as well as arrangements for the custody and treatment of persons deprived of their liberty in its territory, with a view to preventing any cases of torture or other cruel, inhuman or degrading treatment or punishment.

Article 7

Each state shall ensure that all acts of torture as defined in article 1 are offences under its criminal law. The same shall apply in regard to acts which constitute participation in, complicity in, incitement to or an attempt to commit torture.

Article 8

Any person who alleges that he has been subjected to torture or other cruel, inhuman or degrading treatment or punishment by or the instigation of a public official shall have the right to complain to, and to have his case impartially examined by, the competent authorities of the state concerned.

Article 9

Wherever there is reasonable ground to believe that an act of torture as defined in article 1 has been committed, the competent authorities of the state concerned shall promptly proceed to an impartial investigation even if there has been no formal complaint.

Article 10

If an investigation under article 8 or article 9 establishes that an act of torture as defined in article 1 appears to have been committed, criminal proceedings shall be instituted against the alleged offender or offenders in accordance with national law. If an allegation of other forms of cruel, inhuman or degrading treatment or punishment is considered to be well founded, the alleged offender or offenders shall be subject to criminal, disciplinary or other appropriate proceedings.

Article 11

Where it is proved that an act of torture or other cruel, inhuman or degrading treatment or punishment has been committed by or at the instigationof a public official, the victim shall be afforded redress and compensation in accordance with national law.

Article 12

Any statement which is established to have been made as a result of torture or other cruel inhuman or degrading treatment may not be invoked as evidence against the person concerned or against any other person in any proceedings.

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What Ails Medical Education?

GRIEVANCES are being voiced from various platforms against medical education in India for quite some time. Its products, the doctors, are alleged to be found wanting while serving in the rural milieu. The medical curriculum is being blamed for such deficiencies in medical graduates and erudite schemes are being prescribed from time to time. But curiously, the role of medical teachers has eluded the attention of the commentators. That teachers have a profound role on the nature and quality of education goes without saying. This role has been discussed and analysed from various aspects in different forums. The role of medical teachers in medical education, however, has escaped such analysis, presumably because it is taken for granted that there is nothing special to discuss. On the other hand, in the general debate on pay and service conditions of teachers, even during the All India Teachers' strike in 1987, medical teachers were kept, by an apparent consensus, outside the purview of the exercise on the assumption that they are something special. Political authority and officials look upon medical teachers not primarily as teachers, but as doctors first—taking the job of teaching as a secondary one and medical graduates as by products of health care system. Here we will explore the elements which might clarify the role of teachers in medical education. The prevailing picture in West Bengal has served as a model which may differ in many respects from state to state but shares their essential characteristics.

The world of medical education is small. Teachers and students soon become known to each other. An intimate relationship develops between the teacher and the taught in many instances. Thus teachers influence the students not only in their academic life but also in other spheres of life by their personality and behaviour.

The subject of medical education is composed of a number of disciplines each of which being a speciality by itself has its own conclave of functioning. Teachers of each discpline have their separate associations, journals and/or academic forums. At the same time, all disciplines are integrated at the under-graduate level into medicine (MBBS) where teachers of different disciplines have to interact with each other. However, any integrated method of teaching at the under-graduate level has not been evolved as yet. In the post-graduate education, each discipline functions separately.

In the clinical discipline, teachers also act as specialist doctors and consultants, ie they are engaged in treating patients in hospitals attached to the colleges. This has been instrumental in the development of a sustained relationship between the teachers and students. The young doctors with graduate and post-graduate qualifications, enter the world of medical practice and retain their link and relationship with their teachers which is often life-long— the implication being that the teacher-student relationship is extended beyond the boundaries of Alma Mater.

In the earlier days, doctors were inducted into the teaching job in various ways. In government institutions, doctors were appointed as teachers in medical colleges at a ripe age after they had served their due period in non-teaching hospitals spread all over the state. A good number of doctors who acquired post-graduate qualifications, were also offered teaching posts on an honorary basis. In the non-government medical colleges, almost all teachers were on honorary terms or managed to secure a token salary. This honorary system, though advantageous to the employer, had not been resented by the employees. Appointment to a teaching job in a medical college is a very prestigeous position in the medical profession. It brings renown, uplifts status and quickly establishes the teacher in the field of private practice. People look upon medical teachers as the most learned, accomplished and skilful among the doctors; such an attitude works as a one-way ticket to success in private practice. There are, of course, certain grounds for such belief. Medical teachers belonging to clinical disciplines, are daily engaged in the treatment of patients in indoor and outdoor services. They are in a position to experiment with different curative technologies on the hospital patients, perfect them in hospital practice and then apply those technologies profitably in their private practice. Hospital job not only trains the doctor to be a skilful one but also keeps him abreast of continuing developments in the curative technology.

State of Medical Education

Western medicine was imported in India and initially the curriculum and contents of education were necessarily borrowed. Over the years the curriculum underwent many changes and the teaching methods steadily adopted themselves to the Indian reality. A look at this Indian reality will reveal that production of doctors was stepped up rapidly, after independence with a view to expanding the facilities of curative medicine to the largest sections of the people. To employ the increasing number of doctors, state health services underwent rapid expansion; employees state insurance (medical benefit) scheme was launched, and private industrial sector opened up medicare facilities for the employees. In the seventies, the rate of expansion stabilised and a paradoxical situation emerged. It was found that the employment market for doctors was squeezed, opportunities abroad were reduced, the field of private practice turned tremendously competitive, doctors' list in the employment exchange started swelling and junior doctors resorted to agitation for employment. Paripassu, the

largest section of the people, particularly the rural poor remained deprived of the minimum facilities of life-saving curative medicine. Pandits traced the source of this paradox in the quality of medical education. It was propounded that medical education was lopsided; the curative-biased western model failed to properly equip the doctor to tackle the health problems of the Indian people. It was because of this western model, doctors settle in urban areas, itch to migrate to western countries, and practice individual medicine. It was, therefore, proposed that community medicine should be taught and emphasised more and more in the curriculum. New syllabi were introduced accordingly. The department of preventive and social medicine was created and upgraded; the internship period was extended from six months to one year, the R.O.M.E. programme was introduced to give field training to medical students. But the broad community of teachers, who were expected to turn this new revised programme into reality, were not taken into confidence during this entire exercise. In fact, community medicine eventully came to be another subject to be taught by the department of PSM and was required to be learned by the students for examination purposes. Thus community medicine remained a paper exercise; it was not even practised anywhere to serve as a demonstrative model for the students. Neither educational administrators nor teachers had any field knowledge or experience about what community medicine aimed at.

Teaching method underwent little change except adopting themselves to the changing content of the syllabus and changing structure of examination. An integrated teaching approach, by which the student could have a holistic view of the world of medicine as well as the aim of community medicine and which would have enabled him to appreciate the importance of studying different subjects in the pre-clinical and clinical courses to prepare him to be a doctor, was not taken into consideration. Even the modest WHO sponsored programme of integrated teaching in Maternity & Child Health where teachers from the discipline of Paediatrics, Obst. & Gynaec. and P.S.M. join together in a limited way, to explain to the students the disease process in the social context and the methods of tackling it, remained limited to only three centres in India. There also it is being followed perfunctorily. The object of teaching had been and still remains to be an exercise to prepare the student for the examination.

Control of Medical Education

There are three agencies for control. Medical Council of India (MCI) determines the overall standard. MCI prescribes minimum qualification of eligibility of students and teachers, necessary material requirements of a medical college eg space, laboratory, teaching aids etc, sets up teacher-student ratio, student-bed ratio etc and authorises curriculum. Affiliating University sets up detailed curriculum within the framework authorised by MCI, conducts examination and confers degrees and diplomas. Government, who runs the colleges, admits students, appoints teachers and provides the material infrastructure for teaching, including the hospital.

Over the years, control by the MCI and the University has been reduced to a notional character and the Governmental control, which is exercised largely by bureaucrats who are neither doctors nor teachers, has steadily tightened its grip. This control is exercised through financial allocation and through appointment-transfer-promotion of teachers. The teacher actually enjoys a large amount of freedom of manoeuvre in his/her own area of activity ie actual teaching and examination where external supervision and control is minimal, often non-existent. But the teacher has to bow to the bureaucratic fiat whenever called upon to do so.

A sinister trend is being noticed in the medical field in West Bengal since 1983. The ruling party, in its zeal to enlarge its sphere of influence, is (mis)using administrative machinery in order to exercise its control over every level of medical education. The Left Front government has constituted different committees for selection of teachers, for elevation of their academic rank at every level and their transfer. These committees are being manned by pliant people who owe allegiance to the ruling party. Those who are not ready to be used as plectrum are being deprived of their dues. Further, the ruling party, by virtue of its control over the university administration, has played havoc in admission to under-graduate and post-graduate courses, through manipulation over examination results—even prior disclosure of questions has been alleged on several occasions in the mass media. The most scandalous practice which has made headlines is the system of admitting in the MBBS course, wards of ministers, MLA, police officers, businessmen etc, who have been unsuccessful in the admission test, through special power of the chief minister. This indirect political control is undermining academic independence as a whole and bodes ill for the future.

Status of Medical Teachers

The status of medical teachers in the world of medical education is determined by a number of factors, eg (a) The speciality or subject; (b) The status of the teacher in medical practice; (c) The status of the teacher in profession/service.

The subject taught has a lot to do with the status of a teacher. Clinical subjects eg medicine, surgery, obstetrics and gynaecology, eye, ENT etc where diagnosis and management of diseases are dealt with, are accorded extraordinary importance for the reason that these subjects deal with the living beings—patients who need succour. The non-clinical subjects eg anatomy, physiology, pharma-

cology, biochemistry etc, do not deal with patients and hence are treated as unavoidable nuisances. Para-clinical subjects eg pathology and radiology, though do not make direct interventions in treatment, have nevertheless to come in contact with patients and hence, are given some importance. PSM comes nowhere amongst these divisions and hence, ignored like the non-clinical ones. In the practice of medical care also, doctors (and teachers) belonging to clinical disciplines are looked upon by the entire society as the real persons of importance. Policy-makers, planners and administrators are concerned with clinical subjects only. Progressive commentators on health leave out non-clinical and para-clinical subjects from their deliberations, people at large do not even recognise the teachers dealing with these disciplines as doctors. Students search for ideals among the clinical teachers. In West Bengal, only teachers of clinical discipline and radiology are allowed the privilege of private practice so that these all-important persons do not suffer from financial deprivation. These privileged teachers thus can live as members of the upper economic class of the society and pose as role models for the students.

A look at the remuneration enjoyed by the medical teachers is relevant here. On the salary scale, medical teachers are situated below the level enjoyed by general college and university teachers. General teachers have been enjoying UGC pay scale since 1973, whereas medical teachers in West Bengal were given the benefit of UGC scale only in 1981. General teachers now enjoy a much higher pay-scale as recommended by the Mehrotra commission while medical teachers are still lagging behind in the old UGC scale. In the report of the second Pay Commission (1977-80) of the government of West Bengal, the member-secretary observed

> It is doubtful whether conditions of service of the teaching posts on the UGC pay-scale are exactly the same as those teaching posts in West Bengal Health Service. The teachers in the other academic institutions who are in receipt of UGC pay-scale have a limited number of instructional periods in a week. They enjoy vacation and holidays which are not similarly available to the teaching posts in the medical line. This difference apart, the holders of teaching posts in West Bengal Health Service have to do hospital duties which are onerous in nature. The tremendous pressure of population on hospital services has made their duties all the more onerous. There exists a good case for distinguishing the teachers in the medical institutions from their counterpart in the other academic institutions.

The points for distinction are as in the table:

	Average age of eligibility for lecturership.	UGC pay scale granted in	Duty period	Job requirement.	Age of superannuation.	Pay-scale
College Teachers	25 Years	1973	18 hrs/ week.	Teaching	60 yrs.	Rs.2200 -5700
Medical Teachers	38 Years	1981	30 hrs/ week & 24 hrs a day on-call.	Teaching & whole-time medical service in the hospital.	58 yrs.	Rs. 700 -2500

In West Bengal, the clinical teachers have been given the option of private practice in lieu of a 30 percent cut in their salary; in addition—they are debarred from the highest pay-scale (ie their pay-scale is limited to Rs. 700—1900). Consequently, the amount of gratuity and pension also is small. The clinical teacher, therefore, is asked to perform the whole-time job of teaching, whole-time job of a clinician in the hospital and then a whole-time engagement in private practice— a task obviously impossible for a human being. The teacher, in reality, is confronted with a choice to prefer one whole-time job among these three and he, like the average citizen, opts for the profitable one ie private practice. It is a somewhat universal picture that the clinical teachers are accustomed to look upon their salary as a sort of fringe benefit and concentrate on private practice with a fierce dedication to earn as much as they can while the opportunity exists. No wonder, when the state governments in Bihar, Orissa, Andhra Pradesh, Assam etc, withdrew the privilege of private practice, clinical teachers fought at every stage to retain it. In West Bengal, private practice for medical teachers was prohibited in 1982. A case was instituted at the high court and the order was stayed. Soon after, the health portfolio which was under RSP—a constituent of the Left Front, was taken away by the major partner of the Front—CPI(M). The new health minister showed reluctance in implementing the order and the merry atmosphere of private practice continues. Needless to mention, private practice not only offers a return of several times more than the salary figure but also demands a sincere and engaging attention from the clinician. It is simply not possible for a clinician successful in private practice to do justice to the job of teaching and hospital tasks. He has to make a choice, set up a priority.

Then again, among the medical teachers, non-clinical teachers, deprived of status and respect and envious onlooker of their clinical colleagues, fortunes are a frustrated lot who have lost interest both in teaching and in their subject. A good number of them find solace in unauthor-

ised clandestine private practice while others lament. West Bengal has two post-graduate medical colleges where all teachers are forbidden private practice. Their conduct follows the line of the under-graduate non-clinical teachers, ie either clandestine private practice or disinterest in job.

This system of private practice to compensate the clinical teachers has given rise to the following problems:

i) Practising teachers are inclined to settle in Calcutta where the market for private practice is lucrative and are reluctant to accept transfer to another medical college, particularly a distant rural one as it would disrupt the practising network which they have diligently built up with years of effort. The rural medical colleges (there are three in West Bengal) therefore, suffer from a perpetual shortage of teachers.

ii) There is always a long waiting list of doctors possessing eligibility for a teaching post in clinical disciplines and under the unavoidable influence of the law of demand and supply, this situation has resulted in rampant corruption in the matter of teaching appointments. The competition for a teaching post in clinical disciplines has further intensified due to preference for a Calcutta posting. Consequently, clinical teachers try their utmost to retain their Calcutta-posts and resort to questionable means including inciting students to launch agitation demanding the retention of their favourite teachers.

iii) Non-clinical disciplines perpetually suffer from dearth of teachers, not to speak of competent teachers. Aspiring teachers vie for a teaching post in the clinical discipline and barring a few, opt for the non-clinical discipline only when they fail in their endeavour. They accept such postings reluctantly and then try somehow to live with it.

iv) Appointments in the post-graduate colleges are likewise resisted as these are compulsorily non-practising. Teachers in these institutions being non-practising not only suffer financially but also are placed on a lower level of social recognition than the practising ones. Thus they become frustrated and reluctant. Standard of post-graduate medical education has, therefore, deteriorated considerably. In the absence of any incentive, research work, required to be conducted by students, have been turned into paper exercises only. Practical training for students is lopsided. Even among the post-graduate students there is keen competition for the clinical disciplines resulting in corrupt practices in admission and examination, while non-clinical disciplines suffer from dearth of applicants.

What is To Be Done?

The standard of teaching has steadily deteriorated over the years. Zealous attempts to politicise health service has undermined the morale of the doctors including teachers. Non-clinical teachers have little interest in teaching. Teachers of clinical disciplines look upon such appointments as a means of personal aggrandisement and of earning money. Students are merely after the degrees which they would use as capital for their business in medical practice. They have learned the bitter truth that connections in places of influence will fetch them their desired objective—an under-graduate or post-graduate degree/diploma. In such a context, attempts to devise a meaningful methodology of teaching or to revise the curriculum have little relevance. Whatever might be the objective of such an exercise it should not be forgotten that it is the teachers, after all, who are expected to implement the programmes. If objective conditions are not set up so that the teachers participate actively, no programme will succeed.

Another aspect of this messy situation is worth pointing out. The degradation of standards of education makes its own impact on standards of medical practice. Commercialisation apart, scientific excellence in medical care is conspicuous by its absence. Bereft of a rational approach, medicine is being practised as a shot in the dark. Unscientific drugs are being used at random. Modern safer and more effective investigative and operative technologies have not reached even the upper strata of medical practitioners. The less said about clinical research the better. In fact, in the absence of a continuous updating of knowledge, a sort of quackery is rampant even among practitioners holding post-graduate qualifications, not to speak of general practitioners.

Frankly speaking, in the practice of modern medical science, science is the real victim in India. Low levels of scientific knowledge among the medical profession, particularly teachers, have rendered them easy prey to the profiteering campaign of drug and equipment industry. Medical literature, produced mostly by teachers, has not made any positive significant contribution to the development of medical science in the country. An unsavoury example may be cited to give an idea about the hollowness of the medical establishment. Two years ago at the national conference of the orthopaedic surgeons, a paper was presented as a critique of a number of original research articles published during last several years in the orthopaedic journal. Analysing the crucial contents of the articles and citing evidence, this paper revealed that all articles were the products of plagiarism without acknoledgement from the articles published in foreign journals. Scrutiny may show that the picture is no different in other specialities.

Independence or autonomy of teachers, updating of standards and 'check and balance' in career prospect are the areas needing consideration and overhauling. Independence starts with the removal of financial dependence on private practice. The last two Central Pay Commissions

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Medical Education in India: Who Pays?

ravi duggal

It is with the aid of public resources that medical education and the subsequent production of medical humanpower has consolidated itself. Most of this humanpower finds its way into the private sector. Even worse there has been a sustained migration of doctors mostly to developed countries. This we feel is a serious concern. Public resources must be used for public benefit.

MEDICAL education in India is almost entirely the responsibility of the state. Ironically between 2/3rds and 3/4ths of those qualifying from public financed medical schools participate in the private sector. This means for every three allopathic doctors the government trains at the cost to the public exchequer for its own health services, it also trains seven doctors for the private sector at public cost. Besides this a more or less similar pattern exists for non-allopathic medical education (Ayurveda, Unani, Siddha and Homoeopathy) which together accounts for twice the number of allopathic doctors. As though this drain on the public exchequer is not enough, out of every 100 allopathic doctors going to the private sector between 34 and 57 have been migrating out of the country each year, mostly to developed capitalist ones, and recently also to the Gulf countries. This is indeed gross injustice to the poor Indian masses who have contributed their mite in training these doctors in the hope that they will in turn care for them. However, the focus here is not the dynamics of this injustice, which is so openly and unashamedly practised, but to view in a historical perspective the growth and financing of medical education in India.

Prior to the First Five Year Plan there were 28 medical colleges (unless otherwise specified we mean allopathic), all except one being publicly owned, from which about 2500 doctors graduated every year. By the end of the Second Five Year Plan the number of medical colleges had doubled and the doctor outturn increased 2 $^1/_2$ times, and at the start of the Fourth Five Year Plan the number of medical colleges had quadrupled and doctor outturn increased six times (see table 1 and 2). Most of this growth was in the state sector and with the aid of public resources. After the Fourth Five Year Plan the increase in medical education facilities have been very small but expenditure has increased at a galloping pace.

As of present (1987) there are 123 medical colleges in the country with 102 being owned and run by the government or other public bodies like the municipal corporations (four colleges) and universities (three colleges). The remaining 21 colleges are owned and run by private bodies, with most of them getting some financial assistance or subsidies or support from the state in conducting the colleges. Thus, it is largely with the aid of public resources that medical education and the subsequent production of medical human-power has consolidated itself.

This drain of public resources, especially of doctors is only one dimension of the expropriation of medical education, the other is the concentration of the outturns from medical colleges in the urban areas (see table 3), even in the state health sector which can be seen. Between 1952 and 1983 the number of hospital beds had increased 3 1/2 times but as a ratio to the population it had increased barely twice. Thus in the first plan period there was one hospital bed for 2717 population but in 1983 the availability of beds had increased to one bed for 1362 population. But, this aggregate picture is misleading because of the concentration of available facilities in urban areas.

Thus between the first and sixth plan periods the availability of hospital beds changed from one per 706 population to one per 395 in the urban areas in comparison to rural areas where the change was from 9438 population per bed to 5937 population. Since the distribution of medical humanpower data is not available in a disaggregated form the distribution of hospital beds may be assumed as an indirect indicator. Thus in the first plan period only 39 percent of hospitals and 23 percent of beds were in rural areas when 80 percent of the population lived there. In contrast in 1983 when about 76 percent of the population was in rural areas the availability of medical care facilities in comparison to urban areas had declined to 26 percent of hospitals and 17 percent of beds in rural areas. In 1987 the number of hospital beds in rural areas declined further (from 1894 in 1983 to 1633 in 1987) accounting for only 21 percent of all hospitals, the proportion of beds stayed at around 17 percent. In the case of government hospitals the situation is equally bad— in 1983 of all government hospitals a quarter were in rural areas and of all hospital beds in the state sector only 10 percent were in rural areas (CBHI/GOI, 1985). While there is no direct data of medical humanpower available, except 1981 census data — according to the 1981 census of all working (main earners) allopathic doctors only 28 percent worked in rural areas and of all nurses and midwives 38 percent were in rural areas (Census/GOI, 1987).

Besides allopathic services and humanpower there are non-allopathic institutions and humanpower— ayurveda, unani, siddha and homoeopathy. In terms of health care facilities (hospital and dispensaries) in these systems of medicine, the ratio to allopathic facilities is fairly small but humanpower of these systems of medicine is far larger than that of the allopathic (see Tables 3 and 4). Also, in comparison to allopathic doctors, a much larger proportion of non-allopathic doctors are found in rural areas —56 percent according to the 1981 census. Thus in the year

1986-87 there were totally 830, 400 doctors of all systems of medicine, besides 210,000 nurses and over 10,000 dentists (see Table 4). In addition to this in the same year there were 372,140 paramedics (ANMs, MPWs, Midwives and LHVs) (CBHI/GOI, 1988). If we take doctors of all the systems and calculate the ratio of doctors to population we find that in India one doctor exists for every 935 persons, and assuming the rural/urban distribution of the 1981 census we estimate that in 1986-87 for rural areas there is one doctor per 1574 persons (for allopathic one per 6116 persons) and for urban areas there is one doctor per 421 persons (for allopathic one per 793 persons).

Thus it is amply clear that humanpower resources in the health sector as regards the number of doctors is quite adequate, establishing the fact that medical education in terms of supply of doctors has kept pace with the growth of population and is today at a level (or supply) that is sufficient to meet the needs of the country's population. However, the hitch is that it does not meet the needs of the people because a large majority of doctors take up private practice, concentrate in urban areas or migrate abroad — in fact, more allopathic doctors migrate abroad than go to rural areas of India.

As stated earlier, medical education in India has been almost wholly financed by the public exchequer. This money comes mostly from tax revenue collected by the government from the people. Direct payment by students in the form of fees etc is presently very small.

Before we look at the data on medical education expenditure it will be in order to explain in some detail the structure of the state health sector financing.

State health expenditure is divided into three major heads called 'medical', 'public health' and 'family welfare'. 'Medical' is further divided into 'allopathy' and 'other systems of medicine' (non-allopathic). The main sub-heads under allopathy are (a) direction and administration (b) medical relief (c) education, training and research (d) ESIS and CGHS (e) and other sub-heads, and under 'other systems' there are separate sub-heads for ayurveda, unani, siddha and homoeopathy. 'Public Health' is divided into 'Public health and sanitation' and 'sewerage and water supply'— the former being mainly expenditure on communicable diseases prevention programmes and the latter mainly rural and urban water supply schemes. The 'Family Welfare' account includes expenditure on rural and urban family planning services and maternity and child health services.

All the three accounts have a 'capital outlay' section which is mostly construction activity. Thus, under 'medical' the main sub-heads are construction, expansion and improvement of (a) hospitals, dispensaries and health centres and (b) medical colleges. Under 'public health' it includes almost entirely water supply schemes and under 'family welfare' construction of family planning centres.

In this article we are concerned with the sub-head 'medical education' under the medical account section. The data on state expenditure on medical education being analysed here is for the period 1951-52 to 1982-83, a total of 32 years, from the First Five Year Plan to the middle of the Sixth Five Year Plan. The expenditure reported here is 'revenue expenditure'— that is, expenditure incurred out of revenues collected by the state and covers the union government and all state and union territory governments. This expenditure includes only the component spent on medical, dental and nursing colleges. The hospital and other supportive services needed for medical and nursing education are not included in this amount—this component of expenditure is not available separately. Capital expenditure is excluded from 'medical education expenditure'. We will deal with this separately.

Between 1951-52 and 1982-83 the state's expenditure on medical education has been substantial. It has seen a healthy growth of 2.8 percent per year in sharp contrast to 1.4 percent growth rate of total state health expenditure and only 1.24 percent growth of total government expenditure (CAG/GOI, various years).

At this stage we would like to emphasise that it is not possible to calculate how much is spent on training of each medical person because detailed breakups of expenditure on each category of personnel are not available and the supportive, administrative and hospital costs incurred for training are also not known. Performance budgets of states may provide this information but for macro analysis this information is too voluminous to put together because it is available for each college separately. Even here,

Table 1 : Medical Education Infrastructure 1951-52 to 1986-87 (figures at end of period)

Reference years	Medical Colleges		Nursing institutions	Dental colleges
	Number	Percent Private		
Plan I 1952-56	41	7.3	241	7
Plan II 1957-61	60	5.0	208	12
Plan III 1962-66	87	9.2	254	14
Plan holiday 1967-69	94	9.6	259	15
Plan IV 1970-74	105	8.6	270	15
Plan V 1975-79	106	8.5	283	17
Plan VI 1980-83 @	111	10.8	324	25
1986-87	123	17.0	374	26

@ 4 year period including 1979-80 annual plan and first three years of Sixth Plan.

Source : *Health Information of India* (earlier called *Health Statistics of India* and *Pocket Book of Health Statistics*), CBHI, GOI, various years.

however, the supportive costs cannot be known—only field studies at the teaching hospital level will help in breaking down these costs. For instance, in Maharashtra, of the total expenditure on medical education for the years 1981 to 1989 on an average 84 percent was spent on training of MBBS doctors and the rest on other personnel (see Table 6). If we assume this proportion for India for the year 1983 then the cost per doctor to the state for only the medical college component works out to Rs. 84951.78. In the same year, given the average cost of Rs. 50 million per medical college and teaching hospital (on the basis of data for Maharashtra) the annual cost per qualifying student for the teaching hospital (excluding medical college expenditure indicated above) works out to Rs. 372,312.35. Let us also assume that this entire cost is necessary for training of medical humanpower. Taking the same proportion of 84 percent as expenditure for MBBS doctor training Rs. 312,742.37 becomes the teaching hospital cost per doctor and the total cost per doctor totalling to Rs. 397,694.15 (Please note that we are taking one year's expenditure on medical education and teaching hospitals to be the cost of the $4^{1}/_{2}$ years. This method is perfectly okay because in any one year there are 5 batches of medical students. Thus if we divide the above figure by five we will get per medical student cost per year and if we again multiply by $4\ ^{1}/_{2}$ -we prefer 5 — we come back to the same figure). Whether this approach is correct is debatable but the fact that a supportive structure of a teaching hospital is needed for medical education cannot be discounted. Whether the present type of teaching hospital is the right type is a different question altogether but the inclusion of the entire cost of teaching hospitals as part of medical education, we feel, is perfectly justified — and this cost today (1988) in Maharashtra is Rs. 80 million per teaching hospital (for JJ Hospital and Grant Medical College, Bombay the cost is Rs. 150 million). Besides, administrative and capital costs have not been included.

In the First Plan period the state spent Rs. 66.4 million on medical education. (See Table 5) During this period 12,520 MBBS doctors, 657 postgraduates, 142 dentists and 9345 nurses and general nurses qualified from the 41 medical colleges, 7 dental colleges and 241 nursing schools/centres. (Table 1 and 2). This expenditure working out to Rs. 13.28 million per year, was 5.3 percent of all expenditure on medical services by the state and 3.5 percent of the expenditure on total health care (including FP, public health and water supply) spent by the state. (Table 5). More than one - half of this expenditure was by the union government and the three provinces of Bombay, (Gujarat and Maharashtra) West Bengal and Madras (Tamil Nadu). This concentration of expenditure in these provinces continues even today. (See Table 7).

Table 2 : Outturn of Medical Personnel 1951-52 to 1982-83

Reference years	MBBS Doctors	Dentists	Post-graduates (Medical & Dentist)	Nurses (BSc)	General Nurses	Nurse/ Doctor Outturn Ratio
Plan I	12520	145	657	132	9213	1:1.34
	(2504)	(29)	(131)	(26)	(1843)	
Plan II	16047	579	1708	141	12196	1:1.30
	(3209)	(116)	(342)	(28)	(2439)	
Plan III	24631	1210	4002	286	20355	1:1.19
	(4926)	(242)	(800)	(57)	(4011)	
Plan Holiday	26494	1015	3866	290	16284	1:1.60
	(8831)	(350)	(1289)	(97)	(5428)	
Plan IV	55818	2338	8198	570	28981	1:1.89
	(11164)	(468)	(1640)	(114)	(5796)	
Plan V	63350	2410	15860	976	29891	1:2.05
	(12670)	(482)	(3172)	(195)	(5978)	
Plan VI @	46870	2133	17296	1032	30501	1:1.49
	(11718)	(533)	(4324)	(258)	(7625)	

@ 4 year period including 1979-80 annual plan and 1st three years of Sixth Plan period

Figures are total for period, and parentheses figures are annual average.

Source : *Health Information of India* (earlier called *Health Statistics of India* and *Pocket Book of Health Statistics*). CBHI, GOI, various years.

In the Second Plan period, expenditure on medical education almost tripled in contrast to less than doubling of health expenditure. The average annual expenditure on medical education during this period had increased to Rs. 38.04 million which was 8.3 percent of state health expenditure. (Table 5) This is reflected in the 46 percent increase in the number of medical colleges, a 28 percent increase in outturn of MBBS doctors and over 2 $^1/_2$ times increase in post-graduates.

Between the Second and Third Plan periods state medical expenditure leaped again by 2 $^1/_2$ times averaging Rs. 93.3 million per year during the Third Plan period. The number of medical colleges had more than doubled now in comparison to the First Plan Period, and the outturn too had leaped to 24631 from 16047 in the Second Plan — a 53 percent increase. The post-graduate outturn again increased at a much faster rate of 134 percent between the Second and Third Plans. Medical education expenditure in the Third Plan period, increased to 12 percent of medical services expenditure and 7 percent of health care expenditure. (Table 5).

The pattern of growth continued through the Plan Holiday and Fourth Plan period when state expenditure on medical education was 14.3 percent and 16 percent respectively, of state medical services expenditure (Table 5). By the end of the Fourth Plan there were 105 medical colleges in India (96 owned by public bodies) and the outturn of medical graduates in the Fourth Plan period was 55,818 medical graduates and 8198 post graduates. By this time the production of dentists had picked up and every year about 468 dentists were qualifying. However, the growth in the production of nurses remained slack, as even in the Fourth Plan period only one nurse was being produced for every two MBBS doctors. (Table 2).

The situation in the Fifth and Sixth Plans did not change very drastically. Between the Fourth and Fifth period the production of post graduates almost doubled. The ratio of production of nurses to doctors worsened in the Fifth Plan, though improving slightly in the Sixth Plan (Table 2). The expenditure on medical education in these two Plans stabilized at about 13 percent of medical services expenditure and 7 percent of health care expenditure. The average annual expenditure on medical education in the Fifth and Sixth Plan was Rs. 60.8.94 million and Rs. 1187.43 million, respectively (Table 5). Today (1988) this expenditure is about Rs. 3000 million (estimated by author) and against this about 13,000 medical graduates, 4500 postgraduates, 700 dentists and 10,00 nurses are being produced. Besides this there is capital expenditure incurred every year. This data in the national accounts is available only from 1974. Thus in the 5th and 6th Plan periods if capital expenditure on medical education is added to the medical education expenditure, we see that capital expenditure accounts for 10.5 percent and 19 percent of this combined expenditure, respectively, increasing the 5th and 6th Plan annual expenditure to Rs. 680.1 million and Rs. 1467.07 million, respectively. (Table 5) This is a phenomenal expenditure when we consider the fact that between 80 percent to 85 percent of this goes to production of medical graduates and that 75 percent of these graduates go to the private sector. By any standard this is a phenomenal drain on the resources of the public exchequer.

As if this is not enough there is another aspect of this drain of resources. Since the First Plan period the migration of doctors to other countries, especially developed ones, has been very high. In the First Plan period 810 doctors were migrating every year. In 1986-87 this figure had reached 5304. (Table 8). At this figure in comparison the outturn of medical graduates than in the First Plan, 32.35 percent of doctors migrated abroad and in 1986-87 40.8 percent did so. This high rate of migration is very closely linked to imperialism. Our entire medical

Table 3 : Medical Care Facilities (Public and Private) 1951-52 to 1986-87

Reference years	Hospitals	Dispensaries	PHCs (only rural)	Hospital Beds (excluding PHC)	Population (millions)
Plan I	3307	7194	725	145297	379
	(39.3)	(84.0)	(23.0)		
Plan II	3054	9406	2695	229634	409
	(32.8)	(53.3)	(15.8)		
Plan III	3971	10231	4631	306518	464
	(32.5)	(78.9)	(18.0)		
Plan Holiday	4023	10440	4919	328323	506
	(30.7)	(79.1)	(21.0)		
Plan IV	4014	10200	5283	355361	554
	(25.2)	(71.6)	(21.0)		
Plan V	6168	15968	5423	476942	620
	(29.1)	(69.8)	(17.4)		
Plan VI @	7181	21780	7210	53637	687
	(26.4)	(59.4)	(17.4)		
1986-87	7764	25871	14145	594747	776
	(21.0)	(53.2)		(17.6)	

@ 4 year period including 1979-80 annual plan and 1st three years of Sixth Plan Period. Figures at end of period.

Figures in brackets are percent rural.

Source : Health Information of India (earlier called *Health Statistics of India* and *Pocket Book of Health Statistics*). CBHI, GOI, various years. *Statistical Abstract of India* —1984, CSD, GOI, 1985.

education curriculum is western oriented. Doctors are trained in a system which best suits the system of developed capitalist countries. This encourages migration. Not only this but international funding and via it policy too plays its role in causing the continuation of the existing system. For instance all the schools of medical excellence (AIIMS, PGIMR etc.) have been set up with assistance of imperialist agencies. As an example, between 1950 and 1974, nearly 99 percent of all health sector assistance by the Rockefeller Foundation to India went to medical education and research, including attractive fellowships for study abroad (Rockefeller Foundation, various years). Thus, not only do doctors go to the private sector but a significantly large number migrate to other countries as well.

This, we, feel is a serious concern. We are not against the investment of medical education; in fact, if necessary, investment must be increased. What is wrong is the drain of public resources for the benefit of the private sector and of imperialism (through migration). To conclude we feel that the outturn of medical education needs to be regulated. Public resources must be used for public benefit only— this should be the principle in regulation. The mix of expenditure also needs to be changed. More resources have to be committed to the production of nursing professionals whose numbers are only one-fourth of what should exist in India today. Thus a drastic change is needed in the investment and expenditure policy for medical education in India to change radically the growth patterns of medical education and expenditure on it. This change is even more urgent presently, given the wave of privatisation. In 1988, for instance, 13 new medical colleges have been sanctioned, bringing the total to 146 medical colleges; and the striking feature of this is that 12 of these colleges were in the private sector. The danger here is that even private colleges are funded through public finances. Like education in general, this is also true of medical education.

Table 4 : Medical Humanpower 1951-52 to 1986-87

Number Registered at End of Period

Reference years	Allopathic Doctors	Dentist	Nurses	Homeopaths	Ayurveds	Unani	Siddha
Plan I	76904	3003	24724	NA	NA	NA	NA
Plan II	85784	4181	39350	27468	73382	NA	NA
Plan III	111580	4731	59914	NA	NA	NA	NA
Plan Holiday	138744	5485	77824	110514	155828	24530	15413
Plan IV	200003	6559	106751	145434	223109	30400	18128
Plan V	255138	8487	154230	112638	233824	28737	18357
Plan VI @	297228	8725	170888	123852	251071	28382	11532
1986-87 *	340000	10000	210000	150000	300000	28800	11600

@ 4 year period including 1979-80 annual plan and 1st three years of Sixth Plan period

* estimated by author.

NA = Not available

Note : The registered data, with the exception of dentists, is not very reliable.

Source : Same as Table 1.

Table 5: Medical Education Expenditure 1951-52 to 1982-83

Reference Years	Medical education Expenditure		Receipts on a/c of medical education (fees etc)	Percent of expenditure received as fees etc.	Medical Education Expenditure as percent of	
	Revenue a/c	Capital a/c			Medical Service Expenditure	Total Health Expenditure
Plan I	66.4 (13.28)	—	19.05 (3.81)	28.7	5.33	3.47
Plan II	190.2 (38.04)	—	23.9 (4.78)	12.6	8.25	5.20
Plan III	466.5 (93.3)	—	44.85 (8.97)	9.6	11.99	7.01
Plan holiday	486.06 (162.02)	—	40.92 (13.64)	8.4	14.28	7.14
Plan IV	1319.95 (263.99)	—	76.60 (15.32)	5.8	16.06	7.25
Plan V	3044.70 (608.94)	356.15 (71.23)	76.95 (15.39)	2.5	12.79	7.21
Plan VI	4749.72 (1187.43)	1118.56 (279.64)	76.28 (19.07)	1.7	13.33	6.95

Figures are total for period in Rupees million. Figures in brackets are annual average. @ 4 year period including 1979-80 annual plan and 1st three years of Sixth Plan period.

Source: *Combined Finance and Revenue Accounts* 1951-52 to 1982-83, Comptroller and Auditor General of India, GOI, various years.

Table 6 : Medical Education and Teaching Hospital Expenditure in Maharashtra : 1981-1989

Rupees in Millions

Reference Year	Medical Education Expenditure (1)	Medical Colleges Expenditure (2)	Teaching Hospitals Expenditure (3)	Total Medical Education Expenditure (1+3)	Column 2 as percent of column 1
1981-82	112.49	97.71	239.03	351.52	86.9
1982-83	122.21	104.63	241.87	364.08	85.6
1983-84	143.70	121.54	272.46	416.16	84.6
1984-85	150.24	124.96	299.83	450.07	83.2
1985-86	162.11	138.82	334.69	496.80	85.6
1986-87	186.68	158.11	399.41	586.09	84.7
1987-88*	203.48	172.39	447.78	651.26	84.7
1988-89@	244.87	192.32	393.67	638.54	78.5

* Revised estimate
@ Budget estimate

Note: Expenditure only for eight government owned medical colleges, excludes 3 municipal owned colleges of Bombay and 1 private college.

Source : *Performance Budget* of Department of Medical Education and Drugs, Ministry of Health and Family Welfare, Government of Maharashtra, 1983-84 to 1988-89.

Table 7 : Medical Education Expenditure in Selected Major States 1951-51 to 1982-83

State	Plan I	Plan II	Plan III	Plan Holiday	Plan IV	Plan V	Plan VI@
	1952-56	1957-61	1962-66	1967-69	1970-74	1975-79	1980-83
Union Government	0.94	1.27	5.24	12.71	16.62	149.00	295.33
Maharashtra	2.24	7.08	9.22	11.92	23.08	48.92	112.41
Gujarat	(included in Maharashtra)		4.11	8.35	13.80	22.62	47.43
Tamil Nadu	2.51	2.18	6.44	13.18	25.91	46.30	77.00
West Bengal	1.31	1.65	2.91	8.36	13.24	37.73	68.17
Percent share of above govts.	52.7	31.9	30.0	34.0	35.1	50.0	50.1
Andhra Pradesh	0.58	5.36	10.36	14.56	20.63	38.97	75.04
Karnataka	0.02	1.09	4.91	6.56	11.37	29.20	60.15
Kerala	0.30	1.98	5.18	9.76	13.69	26.34	52.94
Goa, Daman & Diu	—	—	1.25	4.10	8.03	4.40	6.32
Uttar Pradesh	0.69	0.81	4.59	8.47	15.25	43.44	59.43
Madhya Pradesh	1.72	2.89	5.82	8.74	11.87	25.73	40.99
Bihar	0.32	2.38	3.58	5.22	9.27	15.96	42.53
Rajasthan	0.21	1.44	4.49	10.59	16.30	25.97	46.11
Orissa	0.35	3.17	8.18	14.00	24.07	16.54	26.22
Assam	0.78	1.59	6.12	12.80	19.34	12.87	20.28
Punjab	0.98	2.39	9.55	7.22	8.98	19.62	36.40
Haryana		(included in Punjab)		1.67	5.13	20.78	38.47
Jammu and Kashmir	—	—	1.16	2.23	3.89	12.84	58.38
Other States & Union territory	0.33	2.76	0.09	1.08	3.52	11.71	23.83
INDIAN TOTAL	13.28	38.04	93.30	162.02	263.99	608.94	1187.43

Figures are Annual Average of Period in Rupees Millions.
@ 4 year period including 1979-80 annual plan and first three years of 6th plan.

Source: Same as Table 5.

Table 8: Migration of Doctors to Other Countries: 1951-52 to 1986-87

Reference Years	No. of Doctors Migrating	Annual Average
Plan I	4050	810
Plan II	5175	1035
Plan III	5950	1190
Plan Holiday	7200	2400
Plan IV	15450	3090
Plan V	21300	4260
Plan VI @	18548	4637
1986-87	5304	5304

@ 4 year period including 1979-80 annual plans and first three years of Sixth Plan.

Source : *Health Information of India*, CBHI, various years
The Brain Drain Study: Phase I — Analysis of ordinary passport issued during 1960-67, IANR, 1970.

[This article has been prepared from data that was collected by the author and other colleagues at the Foundation for Research in Community Health on a research project study on State Financing in India sponsored by the India Council for Medical Research]

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Political Economy of International Migration
Indian Physicians to United States

t k ishi

The number of immigrants from India, as well as other Asian countries, to the United States has drastically increased since the passage of the Immigration and Nationality Act of 1964, which overturned a previous restriction on immigration from Asia. Of the limited amount of literature written on the influx of Indian, most have focussed on domestic concerns: how new immigrants have been assimilated or discriminated against in the new place (Saran and Eames 1980, Fisher 1980). There is, however, much evidence to suggest that an international perspective is needed to fully understand this recent movement of Indians to the United States.

The purposes of this paper are 1) to present a theoretical framework to explain this phenomenon within the context of the international political economy, and 2) to apply this framework to the migration of Indian physicians to the United States for the period between the mid-60s to the mid-70s. This study is part of a larger project by the researcher on a comparative study on the international migration of physicians and nurses from Asia, mainly from India, Korea (republic) and the Philippines.[1] (This article has been reprinted from South Asia Bulletin, Vol II, No 1, 1982.)

BEFORE presenting the theoretical framework, previous theories on international migration should be briefly mentioned.[2] The first major theory deals with 'push' and 'pull' factors operating separately at the countries of origin and destination of migration. The weakness of this theory lies in its failure to see the complex relationship between the two sides of migration. Moreover, the theory tends to focus on individual motivations to migrate. The second theory is the 'equilibrium' theory from a neoclassical economic model. This explains international migration as a natural process of the movement of people to reduce existing inequalities in the supply and demand of labour, as well as in the incomes between the countries of origin and destination. However, this approach cannot explain non-economic variables such as immigration laws. Furthermore, this ignores the fact that international migration, on many occasions, resulted in unequal development, as in the case of migration to western Europe (Paine 1974).

Literature is increasingly available on international migration from a new perspective (Bach 1978, Bonacich and Hirata 1980; Castells 1975; Petras 1981; Burawoy 1976; Portes 1978). This perspective tries to see the international migration of labour within the context of 'core-peripheral' relationship. In other words, immigration serves as a deliberate tool to further the economic development of developed countries (DCs), while emigration is caused by the distorted development of less developed countries (LDCs), influenced by the dominance of DCs over LDCs.

The following study is based on the above approach and tries to examine the validity of the approach by applying it to a case study on the migration of physicians from India to the United States.

The basic variables for the proposed theoretical framework are as follows:

1) The labour need for the economic development of DCs;
2) The role of the labour sector in DCs;
3) The role of the governments of DCs;
4) The labour surplus caused by the failure of LDCs in economic development;
5) The role of the governments of LDCs;
6) The role of the labour sector in LDCs;
7) The cultural, economic and technological hegemony of DCs over LDCs.

DCs with successful economic growth up until the early 70s required a larger labour force in construction, services and professional fields. Also, a 'dual labour market' (Piore 1979), which produced a division in the primary and secondary sectors of industries, as well as in occupations, existed. Foreign labour filled the absolute shortage of labour, and the shortage created by the dual labour market as well.

The labour sector in DCs was very sensitive to immigration, particularly when domestic economies were declining. Fears of competition with foreign labour and lowering effects on salaries by foreign labour were aroused. This pressure from the labour sector in relation to the labour needs for economic growth was the concern of DC governments. As a result, from time to time, DC governments accommodated the above counter pressures, and manipulated the import of foreign labour with various legislations and regulations.

In response to the labour needs of DCs, LDCs filled these needs with their labour surpluses. In fact, the emphasis on gross national products for development plans in LDCs, by and large, neglected unemployment problems. Second, the neglect on the economic development of rural areas caused severe problems in urbanisation. Furthermore, the emphasis on the expansion of capital-intensive industries with the assistance of foreign capital and technology resulted in a retreat in the development of indigenous industries. As such, emigration pressure from various segments of the dislocated population rose

The governments of LDCs either ignored or encouraged the emigration of their own people. Indeed, emigration

served as a safety-valve for the acute unemployment situation in LDCs. Furthermore, remittances sent by emigrants from abroad became indispensable for LDCs to acquire the foreign exchange needed for their development strategies and debts in foreign loans. Generally speaking, however, the labour sector as a collective in LDCs was weak in influencing government policies. Therefore, the labour sector had nearly no influence on emigration itself. Nevertheless, in the administrative and professional sectors (including the medical profession) entrenched personnel successfully maintained their positions by excluding new entrants. In the general context of slow development, these frustrations faced by recent graduates forced many of them to emigrate.

Aside from the above framework, an understanding of the cultural, economic and technological hegemonies of DCs over LDCs which had a tremendous impact on migration from LDCs to DCs should be incorporated. Through these hegemonies, the flow of capital, technology, information and goods from DCs to LDCs apparently contributed to the emigration of people from LDCs to DCs.

The following piece of information is significant in order to grasp the above concept. The US Government recently began to concern itself with international migration in terms of its foreign policy, because most countries with high emigrant populations were major recipients of US foreign assistance, major partners of US trade and targetted areas of US direct investment [US Agency for International Development 1980; Morrison 1980]. Moreover, most countries of emigration were of the more developed countries among LDCs. This fact may suggest that the process of economic development in those countries was much related to the emigration of their own people despite, or because of, their intimate relationship with the United States.

Before concluding this section, two points should be mentioned. First, freedom to leave countries was granted, freedom to enter other countries was not. In this respect, the economic advantage of DCs over that of LDCs greatly influenced the direction of international migration.

Second, the relationship between DCs and LDCs was mutually interdependent, although not under equal terms. DCs had an overwhelming amount of power over LDCs through the movement of various factors such as capital, technology, military and information. Through this, the world economy became more and more systematically integrated into a global unit. In this respect, international migration cannot be comprehended if considered in isolation from the above perspective.

International migration was sought after in DCs as a cheap and substitutable labour source to alleviate the labour shortage. At the same time, multinational corporations left DCs in search of a cheaper labour force in the LDCs. Thus, the concept of an international division of labour is crucial for understanding contemporary immigration in the context of the political economy of DCs and LDCs.

The following is a case study of the migration of Indian physicians to the United States from the mid-60s to the mid-70s. This case could be considered as part of the 'brain drain'. Although the theoretical framework discussed earlier does not specify the migration of high level manpower, such migration can be similarly regarded as a phenomenon of international labour migration due to the role it has played [Portes 1978]. Thus, the framework discussed will be used to analyse the following case study. The reason why physicians are of particular interest is that more data and literature is available for this group than for other occupational groups, and second, that the number of physicians who came to the United States is remarkable.

The period from the mid-60s to the mid-70s was particularly chosen for study because it was during this time that, in a historical context, the international migration of physicians was most prominent. This means that beginning in the early 60s this migration phenomenon became acute and declined after the mid-70s. This case study, thus, focuses around this period; however, on certain occasions, as needed, the period prior to and after the mid-60s to mid-70s will be touched upon.

Magnitude of Immigration From India

In viewing the immigration of Indian physicians to the United States, it should be understood that this phenomenon is only part of the general trend of the emigration of Asian Indians to other parts of the world during the 60s and 70s. One major trend was the immigration to DCs, mainly the United States, the United Kingdom and Canada.[3] Another trend which became important recently was the immigration to the oil-producing Middle East [McCarthy 1979]. With this in mind, the magnitude of the migration of Asian Indians, particularly of physicians, will be described later.

As Table 1 shows, the number of Indian immigrants to the United States has been considerable since the passage of the Immigration Act of 1965. Prior to 1965, the immigration of Asians in general was severely restricted under the McCarran-Walter Act of 1952. Among various occupational categories, professionals and technical workers were the largest. This was, of course, due to the preference for professional immigrants in the immigration law. As a matter of fact, Table 1 shows that a significant number of Indian immigrants was admitted under the third preference of the immigration law, which includes professionals, scientists and artists, although, since the mid-70s, more non-professionals are tending to immigrate. (See Table 1)

In addition to the immigration statistics, the number of

exchange visitors and students was significant. The reason for this was that physicians who were exchange visitors were, first, potential immigrants, and second, performing duties and work in similar areas as were immigrant physicians. As for students, they were important because many stayed in the United States to seek employment opportunities after completing their studies.[4] Table 2 indeed, indicates the magnitude of the numbers of Indian exchange visitors and students, as well as those who adjusted their statuses to immigrants while remaining in the United States. (See Table 2)

However, as both Tables 1 and 2 clearly show, a declining trend existed in the immigration of professionals and of those adjusting from non-immigrant statuses to permanent residents. This was mainly due to the further influx of relatives of US citizens and immigrants, and partly due to a restriction on the admittance of professional immigrants, particularly physicians, as will be discussed later.

Regarding the Foreign Medical Graduates (FMGs) receiving US licenses for the first time, their proportions to the total number of those receiving licenses rose from 5.1 percent in 1950 to 22.4 percent in 1968 [Kabra 1976:600].

In terms of Indian physicians, unfortunately, no chronological data, except for some fragmented data, is available. For example, a survey of Indians in the New York Metropolitan Area in 1978-79 showed that 16 percent were doctors [Leonhard-Spark and Saran 1980: 154]. New York State was the state which the largest number of new Indian immigrant, 24.1 percent between 1970-76, declared as their destination upon arrival [US Immigration and Naturalitation Service: 1970-76]. This fact implies the existence of a significant number of Indians immigrant physicians in the United States. Also, Table 3, although of a recent period, shows the magnitude of these numbers. This data, particularly in 1972, illustrates the existence of a significant proportion of Indian physicians to the total number of immigrant and exchange visitor physicians in the United States. (See Table 3).

In short, although accurate data on the number of Indian physicians in the United States is not available, the magnitude of immigrants, as well as exchange visitors apparently increased greatly after 1965. A study in India by the Council of Scientific and Industrial Research also revealed in 1973 the significance of the outflow of Indian doctors, along with scientists and engineers [Kabra 1976:75].

US Need For Foreign Medical Graduates

In 1970, the percent distribution of professionals in the United States was 14.6, while those in 1950 and 1930 were 8.6 and 6.8 respectively [Chen 1980 : 144]. This change in occupational distribution was partly a consequence of the demands for human capital by modern industrial sectors to sustain a high level in economic growth, and of great financial support in research and development from the government [Thomas 1968: 40-43].

In relation to the medical field, as Table 4 illustrates, total expenditure per capita and percent of the gross national product for health and medical care were increasing. What were the factors influencing the increasing expenditures for health care in the United States? Sorkin [1977:2], in answering this, states that the growing expenditures were mostly attributed to the utilisation of health care services and to inflation, but little to population growth because it was proportionately low. [See Table 4].

The most significant reason for the greater utilisation of health care services was the introduction of the centralisation of the health care system in the United States since the second world war. In the public sector, the basic change occured in 1966 with the Social Security Amendments to implement Medicare and Medicaid. Thus, the public expenditures for health care and the rate of total expenditures drastically increased since then, as seen in Table 4 [Sorkin 1977: 2].

In the private sector, total expenditure rose sharply due to a big expansion in health insurance plans, which were sucessfully resisted by the American Medical Association (AMA) before the second world war (Kim 1981: 150)

Another aspect of the demand for physicians was due to a maldistribution of physicians in the health service system in the United States. This meant, for example, that native physicians tended to choose suburban areas as sites for their more profitable private practices. Therefore, it left 4,000 to 6,000 unfilled positions per year in the inner-city hospitals [Mick 1975: 15, 18 and 19].

However, despite the fact that a drastic increase in the demand for physicians existed in the United States, the AMA failed to respond positively. It maintained a restrictive attitude towards the expansion of medical schools, as well as towards the expansion of national health services [Hock 1970: 27]. The physician/population ratio actually declined from 1950 to 1960 as seen in Table 4. In fact, such a 'cartel-like guild' attitude was intended to keep the income of the physicians high [Adams and Dirlam 1968: 260]. As already evident, although the AMA is not a labour group, it played a similar role as the labour sector described in the theoretical framework of this study. In short, the AMA pressured for the maintainance of the prestige and high incomes of US physicians by attempting to retain a monopoly on the labour supply.

Thus, facing a severe shortage of physicians, the import of FMGs (Foreign Medical Graduates) was needed, particularly for intern and residency positions in hospitals. As a matter of fact, during the mid-70s, one third of all the medical graduates in the United States were FMGs, which included many Indians. The result was to divide the physician population of this country, ie the United States, into two classes: natives and FMGs [Mick 1975: 14 and 17].

Moreover, it was natural that the import of FMGs was desired because it was quicker and cheaper than producing native medical graduates [Reddy 1974: 376]. It should be added that FMGs were faced with problems in state licensure and underemployment. This meant that many FMGs failed the state licensure examinations which allowed them to practice their professions, and that many worked in lower-skilled jobs such as technicians and assistants.[5]

Considering the shortage of physicians caused by the expansion of health care services and the reluctance of the AMA to produce physicians according to the proportionate need in the United States, the US government passed various provisions so that foreign professionals, mainly Asians remaining in the United States, could become immigrants, even before 1965.[6] Otherwise, Asian professionals were unable to become immigrants under the McCarran-Walter Act of 1952, which barred the admission of large numbers of Asian immigrants. Consequently, in 1965, despite the reluctance on the part of public opinion to admit non-white immigrants, other pressures from the government and business communities succeeded in changing the McCarran-Walter Act in order to receive more professional immigrants. Interestingly, this change was paralleled with the expansion of higher educational systems in many Third World countries. According to the new immigration law which became fully effective in 1968, professionals were, categorized under the third preference [Public Law 89-236]. It is needless to say that the influx of FMGs, including Indians, into the United States partially relieved the shortage of physicians, particularly in hospitals in this country.

In addition to the major change in immigration laws, other legislation in regard to the migration of physicians should be mentioned. First, the screening test for FMGs in 1958 by the Educational Council for Foreign Medical Graduates (ECFMG) was established. The test was administered in various countries outside of the United States, and FMGs had to pass the tests in order to be employed in the United States. Second, the Mutual Educational and Cultural Exchange Act of 1961, which provided the exchange Visitor Program, was modified in 1970 in a manner so that the two year foreign resident requirement for exchange visitors before they were eligible to become immigrants, was eased. This amendment [Public Law 91-225] offered incentives to exchange visitors to adjust their statuses. In fact, the number of adjusted FMGs became the major group of new immigrant entries, as Table 1 suggests [Stevens, et al 1975: 440].

However, the trend surely changed after the United States tightened the entry of FMGs with the Health Professionals Educational Assistance Act of 1976, under the Congressional assumption that there was no longer a shortage of phyicians in the United States. This act applied to both FMG immigrants and exchange visitors. Behind this legislation, pressure existed from the various bodies of the American medical profession not to rely on foreign physicians. English language ability and the quality of performance in the delivery of health care were reasons given. Thus, the influx of FMGs to the United States were severely interrupted. Of course, this new legislation greatly affected various hospitals in need of FMGs [Stevens et al 1978: 273-275]. It should be added that due to several health legislations after 1963, the rate of increase in the number of US medical graduates switched from 0.8 percent for the 1956-66 period to 4.8 for the 1966-73 period [Sorkin 1977: 87-103]. Therefore, by the late 70s, it was expected that US medical graduates would absorb the shortage. Thus, it can be said that the role of FMGs was temporarily to fill the shortage created by the delay in a sufficient production of US medical graduates.

As already clear, in addition to the US need for FMGs, various legislation and regulations similar to a 'tariff policy' [Thomas 1968: 40] played a significant role in the supply and demand of physicians in the US market. The international migration of FMGs to the United States was manipulated by different interest groups such as hospitals and the AMA (a quasi-labour group), and the government, as well. The next question to be asked, then, is, "Why did many FMGs in the United States come from particular countries such as India?"

Indian Reply To US Need

In India as in the educational expansion of most LDCs, higher education, in particular, was considered very essential for economic development in the face of an increasing importance of human capital. In fact, the annual growth rate in college enrollments and the total expenditures in higher education were 10 to 13 percent in the 50s and 60s [Ilchman 1974: 121]. Any attempts to restrict admissions in higher education was avoided because they were unpopular and politically unwise [Tobias 1968: 39]. Moreover, in addition to the inability of the Indian government to control the output of graduates due to its decentralised system in higher education [Domrese 1970 : 226], several five-year development plans failed to absorb the graduates into the Indian domestic labour market, leaving severe unemployment [Puttaswamaiah 1977: 79-106]. In short, the lack of coordination between education and human power planning caused educated unemployment, which led to the emigration of many educated people from India.

With regard to physicians in India, the situation was the same, although not as severe as for scientists and engineers [Ghosh 1979: 281]. The expansion of medical education in India after the nation's independence was great, particularly during the Third Five-Year Plan between 1961 and 1966. According to Mathur [1971: 76, 77 and 93], the actual annual intake of medical students rose from 2,675 in 1951 to 11,106 in 1968, along with a tripling in the number of medical colleges. And, the estimated surplus of

doctors in the future supply and demand of doctors in India, utilising various methods to estimate projected numbers, were 13,000 in 1971, and 32,000 in 1976.[8] Nonetheless, as long as a shortage of physicians in terms of a physician/population ratio existed, the production rate of medical graduates was expected to be larger than the growth rate of the population in India according to Indian planners [Tobias 1968: 140]. How could this contradictory phenomenon be explained?

One explanation lies in the maldistribution of physicians in India. This meant that most physicians refused to work in rural areas or public services because of lower remunerations and the lack of facilities available in those areas. Physicians were concentrated in big cities and developed areas where higher income was expected. [Marthur 1971: 61]. In the economic sense, the purchasing power of medical services in rural areas could not meet the expectations of medical graduates in terms of the expected high incomes and the cost for training these physicians. In addition, the lack of logistical facilities in rural areas and public services created a reluctance among physicians with specialized training to work there. Therefore, a mere consideration of the physician/population ratio in India, as a whole, could not be a sufficient indicator in planning the output of physicians. As Gish [1975: 5-7] describes, the maltraining and malutilisation of physicians should also be regarded as being important in understanding this unequal distribution between city and countryside.

In short, a lack of coordination between the desire to expand the production of medical graduates and an inability on the part of the country to utilise these graduates, along with the maldistribution of physicians caused unemployment problems for physicians, mainly in the major cities of India. Nonetheless, the employment concern of Indian economic development was treated as a minor problem. The emigration of Indian physicians, therefore, could be seen at least, as an alternative to resolve the unemployment problem by individual physicians seeking prospective jobs in other countries.

In terms of the employment structure of professionals in India, particularly that of physicians, it is not clear how the government viewed the emigration of their professionals. However, it should be mentioned that, as Banerjea [1975: 192] notes, favouritism, nepotism and seniority in appointments and promotion affected the younger professionals. Through the use of favouritism and nepotism, only those having political and personal ties with the hiring selection committees and promotion personnel tended to be selected. Thus, the qualifications of those seeking appointments or promotions were of secondary concern. Of course, this type of practice was also common in other LDCs.

The professional structure inherited from a British model also limited the opportunity for juniors, or younger generations, in terms of positions, as well as income [Dandekar 1968: 217-219]. Thus, the conflict between seniors, or established generations, and juniors, was serious, and many young professionals could not better their opportunities in India. In effect, 'elite feudalism' [Khadria 1978: 103] maintained the status quo of established professionals and prevented the incorporation of increasing professionals. Such negative factors, of course, facilitated the emigration of professionals, including physicians.

Upon considering the factors influencing the emigration of professionals, what were the responses of the Indian government? The situation of a brain drain was repeatedly discussed by LDCs. Yet, there was no definite assessment in regard to whether the migration of high-level manpower was a loss to the countries which produced emigrants, and how the LDC governments could prevent their people from leaving their countries.

India was not an exceptional case. Although India tried to discourage the 'brain drain,' it was actually not among the most urgent issues needing to be resolved, as will be described later. There were more acute problems caused by underdevelopment. The government, overall, could not effectively control the exodus of its high-level manpower.

It was only in 1958 that the Indian government took concrete action in establishing the Scientists Pool for qualified Indians abroad. The objective of the pool was to provide temporary placement for persons returning from abroad with high qualifications, mainly in science, technology and medicine, until they could find permanent posts in India [Abraham 1968: 88-90]. However, the pool system proved to be ineffective in encouraging qualified persons abroad to return home because it did not coordinate its efforts with existing employment opportunities and conditions in India [Domrese 1970: 250; Abraham 1968: 105-6; Tobias 1968: 190]. Moreover, although the government tried to bring back high-level manpower from abroad, it did not intend to prevent them from leaving India.

Concerning the medical fields, the government did take some actions against the emigration of physicians. One such action was the government banning of tests given by the Educational Council for Foreign Medical Graduates (ECMFG), which screened FMGs for work in US hospitals as interns and residents. Indian physicians, however, were still able to take the tests in neighbouring countries. Another action required medical graduates from state medical colleges in India to serve the public health system in medical fields for a limited period [Abraham 1968: 110]. These measures were apparently based on the absolute shortage of physicians in India as earlier mentioned, resulting from the low physician/population ratio, and the maldistribution of physicians in the country.

Although not particular to the case of physicians, the role of the Indian government in the emigration of high-level manpower, including medical manpower, is discussed below. As previously stated, the government did not seri

ously concern itself with the emigration situation. For example, in a report by the Education Commission for 1964-66, a statement indicated that the 'brain drain' issue was over-exaggerated.[9] What were the underlying reasons behind the neglect on the part of the government concerning this very issue?

It appears that there were two major reasons for the neglect. One was that the government was unable to tackle the problem of unemployment, in general, and of its educated people in particular. This implied that the issue was 'overflow' not 'brain drain' [Baldwin 1970: 358]. Whether or not it is appropriate to use the term 'overflow,' it is definite that the emigration of high-level manpower, including physicians, served as a 'safety-valve' against the acute unemployment situation [Blaug 1969: 161]. It was also true that educated unemployment was a political threat to the state because the educated were influential enough to address their own concerns.

Another reason was related to the foreign exchange reserve. India, as one of the developing countries, received a large amount of foreign capital through foreign assistance and direct foreign investment in order to develop its economy. Nevertheless, in doing so, India became largely reliant on foreign capital historically from the United Kingdom and contemporarily from the United States. It is needless to say that foreign exchange was also required to pay off debts accumulated through foreign loans, and the import of oil, machinery and technology.

In relation to the emigration issue, the governments refusal to grant foreign exchange for the operation of the Association for Service to Indian Scholars and Technicians (ASSIST) in the United States and the United kingdom, which was to coordinate Indian high-level manpower from abroad and provide placement in India, implied a priority set on foreign exchange by the government [Tobias 1968: 192]. Such concerns were reflected in the control of foreign exchange acquired through the Reserve Bank of India. And in the case of medical graduates, they were able to receive foreign exchange conditionally [Domrose 1970: 246 and 247]. In short, as Blaug [1969: 159] states, the 'brain drain' was unfavourable, but the foreign exchange problem was worse.

Along with the decline in foreign exchange reserve, the importance of remittances sent by Indians abroad began to play a significant role in acquiring foreign exchange, as Table 5 illustrates.[10] Various measures taken by the government to encourage the emigration of Indians into the Middle East were such an example [Nadkarni 1978]. In respect to the emigration to the United States, the situation was not clear, but a large amount of remittances to India was, naturally, expected.[11] (See Table 5).

In sum, the overall policy of the government regarding the emigration of professionals consisted in posing few or no obstacles to their leaving the country. There is no doubt that, unlike the Soviet Union, the Indian government did not want to be scrutinised over the human rights of people to leave the country freely by heavily taxing the people [Bhagwati 1976: 13]. To the contrary, as in the case of the emigration to the Middle East, the government even encouraged the emigration of its own people whether they were labourers or professionals due to acute unemployment and the lack of foreign exchange in India.

US Indian Linkage

It has, thus far, been argued that the emigration of Indian physicians to the United States was caused mainly by US demand, and partly by a surplus of physicians in India resulting from the underdevelopment of the country. Also mentioned was that population movement as such was directly promoted by immigration legislation in the United States. However, in the final section of this paper, the linkage between the two perspectives, the United States and India, will be discussed. In fact, the US-Indian political economy is a basis for understanding the migration.

Beginning in 1956 through the Second and Third Five-Year Plans, the Indian government emphasised the expansion of the public sector by introducing heavy industries.[12] As a matter of fact, the development of industires in the production of goods, particularly steel, machinery and chemicals, was accelerated during this period. On the other hand, this tendency to place an intensive emphasis on the heavy industries of the public sector caused reactions in the Indian economy, as a whole. For example, by ignoring other sectors of the economy, eg agriculture and small enterprises, such problem as stagnant agricultural production and the existence of widespread manual industries were perpetuated. This situation led to an imbalance in trade because India had to import agricultural goods as well as machinery and equipment, and to maintain its investments throughout the Five-Year Plans. In addition, by neglecting light industries, where its strength was, India's exporting powers were weakened. Therefore, Table 6 illustrates the trade deficit expanded from the late 50s to the late 60s. However, the domestic market which was to absorb the output of newly built heavy industries remained weak. This was due to the continuing existence of the widespread poor segments of the Indian economy, which was perpetuated by the industrialisation policy. As a result of this gap between the primary and secondary sectors of the economy, India, lacking the capital to import goods and to maintain its industrialisation policy, began to rely on foreign capital, either in the form of aid or direct investments. (See Table 6).

In looking at Table 6, it is obvious that the proportion of Indian import from the United States increased from 13.1 per cent in 1955-56 to 38.0 per cent in 1965-66, and also that the United Kingdom underwent a decline in its influence.

Such a shift in influence from the United Kingdom to the United States was a clear manifestation of the US hegemony over India during this perod, as well as over other Asian countries. Table 7 illustrates the magnitude of US foreign aid throughout the world. To be sure, India was the largest recipient of US foreign aid throughout the mid-50s to the late 60s. Of course, this was due to the economic potential and strategic importance of India as noted by the US agency for International Development [1966: 106]. The US share in foreign aid to India was the largest, at 51 per cent, not mentioning the share from the World Bank, which was primarily US controlled [Ito 1972: 126]. (See Table 7).

While Indo-US economic relations were deepened through trade and aid, direct foreign investment in India also was outstanding beginning in this period. The US share increased 9 per cent in 1955 to 27 per cent in 1968, while that of the United Kingdom declined from 83 percent to 41 percent in 1955 and 1968 respectively [Ito 1972: 131]. This meant that India ceased to be a monopolised market for the United Kingdom, while the United States became more influential. In fact, as Table 8 shows, US investment in India, through US affiliations and rupee companies controlled by US capital, as well as technological collaborations, increased tremendously beginning in the 60s (See Table 8).

India did not take a policy of export expansion until the early 60s. Capital flowed mainly from the United States in the form of aid and private investment, which became indispensable for the increase and/or maintenance of the output of Indian industrialisation. A huge deficit in the balance of payments in India made it difficult to pay loans previously received. The situation was aggravated by the Indo-Pakistan War of 1965, along with the temporary stoppage of US aid. With this crisis in India, India changed its development policy after 1965 by devaluating the rupee, relieving economic control by moving towards liberalisation, implementing the 'green revolution' and emphasising the development of the private sector. Needless to say, this modification was to accommodate a strong outside pressure, primarily the World Bank, belonging to the Aid-India Consortium, led by the United States. In this respect, having already relied on foreign collaboration from the United States in particular, the Indian economy hence became deeply involved within the US hemisphere.

Important, particularly for understanding the migration of physicians, is the factor of the hegemony of US technology over that of India. As Kabra [1976: 53] explains, technological 'colonialism' became a common feature in India through the instrument of multinationals. Since multinationals utilized their own technology which was under continual change and was brought from abroad for commercial use, it was impossible for India to keep up and digest the imported technology. As a result, large-scale industry, with foreign collaboration, slowed down the development of the indigenous technology of India. Therefore, Indian telent became isolated and was not able to contribute to the country's own technological development [Ray 1971: 2061]. As long as India depends on multinationals for capital and technology. India will continue to rely on the imported technology of the United States.

Of course, in addition to the monopolisation of technology by the United States, the gap in the absolute amount of expenditures and the percentages to the gross national product (GNP) in Research and Development between the United States and India, 34 billion dollars, or Rs 26,000 crore (3.4 percent of the GNP), and Rs 150 crore (0.43 percent) respectively in 1971-72, perpetuated the existing US hegemony in technology [Banerjea 1975: 190-191].

As such, the technology of the United States, which was not available in India, became attractive to Indian professionals, including physicians, who wanted to pursue further research and training. Several surveys do indicate convincingly that professionals who leave their countries and live in the United States permanently do so largely for the research facilities and logistical supports available only in the United States [Oh 1977; Cortes 1974].

However, it was not only individuals who sought US technology but institutions in India as well. This point needs clarification since India, from its colonial period, modelled itself after the United Kingdom. Yet, as the United States came to lead the world in technology, US influence on Indian educational and research institutions became apparent. A typical example was the Indian Institute of Technology, Kanpur, established through the assistance of the United States [Sreenivasan 1978].

In relation to the medical field, the case of the All-India Institute of Medical Sciences was notable because it received 6 million dollars for its construction from the US government. Among private foundations concerned with public health and medical research, the Rockfeller Foundation was most active with its grant to the Indian Association for the Advancement of Medical Education [Sodeman 1971: 168-170], and provision of funds for teaching and research equipment to many medical colleges and institutes in India. Family Planning was clearly a very important project of the Foundation [Mukherji 1978: 170-71].

The introduction of US methodology and equipment for teaching and research no doubt led individual students and graduates to seek higher education in the United States. Also, needless to say, studyabroad programmes encouraged by the Indian government were another factor. Ironically the purpose of absorbing and importing western technology through the study-abroad programme was not well achieved due to the large number of students who did not return home.

The fact that graduates of elite institutions, such as IIT Kanpur, went abroad and returned with prestigious positions, suggests that, although these graduates were not

TABLE 1

Indian Immigrants, Professionals, Exchange Visitors and Students to the United States, 1960-1978.

YEAR	Immigrants	Exchange Visitors	Students	Professionals, Technical and	Percentage of total immigrants
1960	391	1,337	1,591	118	30.2
1961	421	1,579	1,947	139	33.0
1962	545	1,567	2,029	167	30.6
1963	1,173	1,879	2,104	595	50.7
1964	634	2,029	2,025	220	34.7
1965	582	2,073	2,558	198	34.0
1966	2,458	1,782	2,535	1,424	57.9
1967	4,642	2,527	3,158	2,474	53.3
1968	4,682	2,507	4,048	2,189	46.8
1969	5,963	2,244	4,670	2,889	48.4
1970	10,114	2,242	5,392	5,171	51.1
1971	14,310	2,402	5,683	7,543	52.7
1972	16,926	1,969	4,071	8,171	48.3
1973	13,124	1,540	4,266	4,941	37.6
1974	12,779	1,427	4,714	4,812	37.7
1975	15,773	1,812	3,495	6,156	39.0
1976*	17,487	1,000	2,649	6,408	36.6
1977	18,613	1,021	2,329	5,762	31.0
1978	20,753	1,009	3,202	4,731	22.8

*The numbers do not include those admitted between July 1 to September 30, 1976 since the physical year of the Immigration and Naturalization Service changed from July through June to October through September in 1977.
Sources: a. U.S. Immigration and Naturalization Service (1960-1977)
b. U.S. Immigration and Naturalization Service (1978).

TABLE 2

Adjusted Indian Immigrants.

YEAR	Total adjusted	Status of entry			
		Students	Spouses and children of Students	Exchange Visitors	Spouses and Children of Exchange Visitors
1966	1,789	1,015	184	47	11
1967	2,822	1,703	345	83	52
1968	2,276	1,383	410	73	40
1969	2,779	1,567	525	117	73
1970	3,886	2,242	752	143	63
1971	6,144	2,925	955	836	554
1972	7,810	2,940	852	1,636	1,047
1973	4,823	1,332	260	1,264	814
1974	3,962	1,703	374	406	299
1975	4,188	1,901	497	266	181
1976*	4,463	2,009	540	333	219
1977	4,146	1,576	417	492	364
1978	4,430	1,996	440	277	218

* See the footnote in Table 1. Sources: Same as Table 1.

TABLE 3.

Physicians and Surgeons Admitted to the United States as Immigrants and Exchange Visitors.

Countries	1962	1963	1964	1965		1966		1967	
	Im.	Im.	Im.	Im.	Exch.	Im.	Exch.	Im.	Exch.
All countries	1,797	2,093	2,249	2,012	849	2,549	896	3,325	1,234
Argentina	94	116	151	140	47	115	—	126	47
Canada	280	467	440	380	314	393	339	449	300
Columbia	75	90	158	82	30	80	—	116	21
Cuba	120	156	229	201	—	150	1	162	1
Germany (Fed).	73	71	82	75	157	81	155	91	167
India	12	16	8	11	352	40	444	87	842
Japan	8	35	4	11	359	31	423	40	533
Korea (Rep.)	18	19	10	11	247	35	291	70	217
Mexico	70	97	77	110	127	119	131	86	160
Phillipines	119	101	63	66	572	259	754	550	657
U.K.	119	154	165	147	153	187	174	206	539

TABLE 4

National Health Expenditure (in million dollars)

	1950	1955	1960	1965	1970	1975
Total expenditures	12,027	17,330	25,856	38,892	69,201	122,231
Percent of GNP	4.5	4.5	5.2	5.9	7.2	8.4
Private expenditures	8,962	12,909	19,461	29,357	43,810	71,361
Public expenditures	3,065	4,421	6,395	9,535	25,391	50,870
Percent of total expenditure	25.5	25.5	24.7	24.5	37.0	41.6
Number of Physicians	233	255	275	305	348	409
Rate of population per 100,00	149	150	148	153	166	188
Population (1000)	151,326	165,069	179,979	193,526	203,806	213,032

Source : U.S. Bureau of the Census (1977 : 11, 94, 104)
U.S. Bureau of the Census (1965:11).

TABLE 5

Indian Private Transfer Payments*

YEAR	AMOUNT
1955/56	408 million Rupees.
1960/61	826 million Rupees.
1965/66	949 million Rupees.
1970/71	1,364 million Rupees.

* Private transfer payments include maintenance remittances, receipts of missionaries, remittances of savings, migrants, transfers, and since 1964 receipts of pensions, retirement benefits on private account.

Source : India (Republic). Central Statistical Organization (1974: 233-238)

TABLE 6

Value of Imports into Exports from India, by Principal Countries (million Rupees).

Imports of Merchandise

	1955/56 (%)	1960/61 (%)	1965/66 (%)	1970/71 (%)
Total	7,744	11,216	14,085	16,342
Canada	110(1.4)	199(1.8)	305(2.2)	1,172(7.2)
Germany (Fed.)	651(8.4)	1,225(10.9)	1,371(9.7)	1,075(6.6)
Iran	245(3.2)	296(2.6)	341(2.4)	916(5.6)
Japan	383(5.0)	608(5.4)	793(5.6)	834(5.1)
U.K.	1,998(25.8)	2,172(19.4)	1,501(10.7)	1,268(7.8)
U.S.A.	1,016(13.1)	3,276(29.2)	5,348(38.0)	4,530(27.7)
U.S.S.R.	72(0.9)	159(1.4)	832(5.9)	1,061(6.5)

Exports of Merchandise

	1955/56 (%)	1960/61 (%)	1965/66 (%)	1970/71 (%)
Total	6,034	6,324	8,016	15,244
Japan	301(5.0)	349(5.5)	5717(7.1)	2,021(13.3)
U.K.	1,644(27.2)	1,707(27.0)	1,448(18.1)	1,700(11.2)
U.S.A.	853(14.1)	998(15.8)	1,470(18.3)	2,068(13.6)
U.S.S.R.	33(0.5)	288(4.6)	929(11.6)	2,098(13.8)
Trade Deficits	-1,710	-4,892	-6,069	-1,098

Source: India (Republic), Central Statistical Organization (1974: 206-211)

TABLE 7

Major Recipient Countries of U.S. Government Foreign Aid, 1955-1975 (in millions of dollars).

	1955a	1960a	1965a	1970a	1975b
Total, net	4,909	4,590	5,052	5,695	8,681
Brazil	37	42	153	93	193
China (Taiwan)	109	109	49	14	191
India	118	523	854	434	243
Korea (Rep.)	279	261	167	198	314
Pakistan	67	229	349	242	134
Turkey	97	101	140	88	73
Vietnam (South)	203	186	301	418	—

Source: a. U.S. Bureau of Census (1970: 872-875) b. U.S. Bereau of the Census (1977:859).

TABLE 8

U.S. Investment in India (in millions of Rupees).

1956	470
1960	726
1964	1,660
1968	4,223
1972	4,850
1976	*5,100

Source: Mukerji (1978:126). Complied from the data of the Reserve Bank of India.

*estimated

emigrating, they played a role in perpetuating the trend of modelling the educational system in India along the lines of educational institutions in the US. Naturally, in the case of FMGs, there was an expressed concern in the United States regarding the purchase of pharmaceuticals and equipment by other countries (including India) through FMGs. This meant, when FMGs returned to their home countries, it was expected that they purchase and introduce products from the US into their countries [US Select Commission on Immigration and Refugee Policy 1980 : 216-217].

In regard to the cultural aspect of migration, the 'colonial' mentality which was formally created through British rule in India should be considered. That is, in India, the British educational model was considered superior to that of the Indian [Munjee 1975 : 17]. A similar attitude was reflected towards US culture after the decline of British influence in India. This indealisation of western culture ignored or downgraded the culture of India. Thus it could be understood why the foreign-educated were considered superior in their fields in India even though they might not have had efficient skills [Munjee 1975: 17]. In looking at the 'neo-colonial' relationship with the United States, the attitude, although difficult to measure, is significant. It is well-known that the 'demonstration effect' which came forth with the influx of western goods stimulated Indian minds. On the other hand, those who went to affluent societies such as the United States became accustomed to the small conveniences of the United States, and thus, did not return [Daendekar 1968: 215].

In addition, 'neo-colonial' ties with the United States contributed to the emigration of Indian phyicians through the network of Asian Indian communties in the United States, and the information flow between India and the United States. For instance, the Directory of Approved Internships and Residencies by the AMA played a significant role in informing FMGs of the opportunities in the United States [Stevens et al. 1978 : 95].

In sum, the United States, backed by an overwhelming flow of capital goods, technology, and information, intervened in India's own economic development and incorporated India within its sphere. With an understanding of this relationship, which was not equal in nature, reasons behind the migration of Indian physicians to the United States can be seen.

Conclusion

In conclusion, it should be emphasised first that the phenomenon of migration is not a separate issue from interdependence under unequal terms between DCs and LDCs. In the case of India, the United States, replacing the United Kingdom after the late 50s, exercised an overwhelming influence on India through the movement of capital, goods, technology and information into India. This hegemony of the US over India began to incorporate India within the US sphere. This linkage is the very factor for understanding the exodus of Indian physicians to the United States.[13]

In this respect, international migration can be considered as an analogy to internal migration because after the influx of urban capital and system of production into rural areas, people were pushed out. Today, a similar relationship is exercised at an international dimension. Indeed, the movement of people from LDCs to DCs plays a role in establishing an international division of labour, while still other factors of movement, capital and technology, occur in an opposite direction, as earlier mentioned.

It should be stressed also that DCs are very much responsible for inducing migration from LDCs for the sake of their economic development, and whenever the situation changes, they are able to limit the entrance of immigrants. It is the DCs which have the option to open or close doors to immigrants, and the LDCs and individual immigrants must rely on DC policies, even though individuals may profit from the migration. Thus, the issue of the contribution made to the development of DCs by the international migration of high-level manpower from LDCs has also been discusssed, a phenomenon referred to as the reverse transfer of technology [Kabra 1976; Mainstrean 1974]. Indeed, generally speaking, freedom of mobility is widely acknowledged; however only the freedom to leave countries is granted, the freedom to enter countries is not.

Notes

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1. As part of my project, I have done another case study on Pilipino. See Ishi [1982].

2. For a critical review of previous literature on international migration theories, see Bach [1978] in details.

3. For an overview on Indians abroad, see Tinker [1977].

4. According to Oh [1977: 33], the estimate of the non-return rate of Indian students was 59.5 per cent.

5. Regarding the problems faced by Asian health profesionals in the United States, both California and New York State Advisory Committees to the US Commission on Civil Rights made efforts to address the needs of Asian health professionals. See US Commission on Civil Rights, California Advisory Committee [1975] and New York State Advisory Committee [1980].

6. For a historical development of immigration laws in relation to manpower concerns, see Awasthi [1967] in details

7. Chen [1980] describes the background of the Immigration and Nationality Act of 1965 in respect to who pressured its passage.

8. The various methods used by Mathur [1971: 80-81] to estimate the supply and demand of doctors are as follows: 1) Supply was estimated from the assumption that no new medical college would be added, and the annual intake capacity of 15,000 would be fully met. 2) Demand was estimated a) from doctor/population ratio norms, b) the relationship between stock of doctors and the growth of national income, c) the relationship between demand for doctors and the stage of economic development-the fitting of the regression curve of doctors on national income to the data of different countries, and d) the component approach.

9. Cited in Pandit [1968: 109]. Also, in Reddy [1974: 375] cited that the Financer Minister of India in 1968 said the brain drain was not a loss to India.

10. The trend of increasing remittances countinued after 1975 when the incentives for non-resident Indians to invest in India were taken by the government [Rele 1976: 270].

11. According to a survey, approximately 60 percent of the Indians in metropolitan New York area send remittances to relatives in India of 100 US dollars or more per month [Thottathil and Saran 1980 : 245].

12. The following argument is based on a study by Ito [1972] in respect to Indian economic development after the second world war.

13. The study on the migration of Indian physicians from India to the United kingdom and the United States, and of British physicians from the United Kingdom to the United States, should be fascinating. Along with the US hegemony on research and development, and the establishment of a national health service system in the United Kingdom, many UK physicians went to the United States while many Indian physicians filled the shortage in the United Kingdom partly caused by the exodus of UK physicians. However, Indian qualifications were only recognised up until 1975. Afterwards, it became difficult for Indian physicians to emigrate to the United Kingdom [Smith 1980: 1-12]. In 1976, the United States also imposed stricter requirements as mentioned in this paper.

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Undergraduate Medical Education in Underdeveloped Countries: The Case of Pakistan

s akbar zaidi

The type of medical education of a country is closely linked with its system of health care. Any health care system, with its own peculiarities, requires a certain type of doctor who can function effectively in the given environment. The same is the case with underdeveloped capitalist countries, such as Pakistan, where a skewed, elitist, curative model of health care exists. In Pakistan, where the literacy levels in the native tongue are very low, medicine is taught in English, and nearly all prescribed textbooks are written in and for the West. Conditions specific to Pakistan, such as the degree of cheating in exams, the time lost due to closure, and the level of debate concerning the medical system may find their parallel in other UDCs. Since it is the social and economic forces, which in the final analysis, determine the system of health care and medical education, one cannot expect any significant improvement within the existing class structure. (Reprinted from *Social Sci. Med.* Vol. 25, No.8)

THE historical evolution of most underdeveloped countries (UDCs) has resulted in a pattern of medical and health care which is, to a great extent, modelled on that found in developed countries (DCs). A salient feature of this type of health care is that it is essentially curative in nature. However, as the degree of social and economic development in UDCs still lags behind that in the DCs, the resulting model of health care is of a peculiar and distorted kind, and is in most cases, not as successful as that found in DCs [1-8].

The main feature that has evolved from this (curative care) type of health structure is the dominant role of the doctor in administering medical care. The preferable pyramidal structure for health personnel, where there should be more auxiliary health workers assisting each doctor, is in most UDCs, inverted [5, p 18]. These doctors have thus become the 'frontline' health workers, whether they function at urban hospital or district level. The role a doctor performs in any society is determined by the system of health and medical care in the country, which in turn is largely determined by the socio-economic formation prevalent there. Furthermore, the model of medical education, the process through which doctors are produced, is tied in very closely with the model of health care in that country and with the demands and perceived needs of the people or their ruler. If the model of health care in a capitalist UDC is one which is urban-based, hospital and curative care oriented and determined by the workings of the market mechanism resulting in a small minority of the population having any feasible access to the system, the doctor will go through a number of years of medical school so as to be able to work effectively in such an environment.

In socialist oriented countries, attempts will be made to make the doctor's role radically different and to involve him in social and community oriented health projects. This, however, is easier said than done, and a mere desire is not a sufficient condition to fulfill such political tasks. Given the fact that the medical education system before social change in these UDCs was one governed by the old socio-economic formation, the new socio-economic formation may not be able to bring in a new radical programme for medical education overnight. Clearly, the superstructure and its parts will take much longer to change than will the base. Nevertheless, a revolution in society will have its affects on the health system, which, as experience from the world in the last 40 years shows, will be greatly improved and expanded. For example, almost all socialist countries have made impressive gains in the health status of their people, thanks to the programmes of basic nutrition, housing, sanitation, water and education which now reach a majority of the population. Thus, physicians in these societies will be *aided* by the expanded health infrastructure in their attempts to eradicate disease. This advantage is clearly lacking in capitalist UDCs.

Furthermore, there is a difference in the position of doctors in the health system's matrix in capitalist and socialist UDCs. In capitalist UDCs, the doctor *(and thus medical education)* plays a more dominant role since supporting health infrastructure are lacking. In socialist oriented UDCs, other factors in the health matrix begin to play an increasing role. That is not to belittle the role of doctors and the importance of medical education in socialist oriented UDCs. Experience from these countries shows that by realising the importance of the role of doctors, concerted efforts are made to change the medical curriculum and to produce doctors oriented to the needs of the local environment. However, as has been argued above, the results may take time to bear fruit, as remnants of the old system may cause hindrances.

This paper will examine the issues relating to medical education in UDCs. After a brief overview of UDCs in general, we will turn to the particular case of Pakistan, a post-colonial state, and critically evaluate the system of medicine and medical education in this country. The final section will deal with the possibility of reform in medical education.

Health Care and Medical Education in UDC's[1]

A great deal of literature exists which deals with the model of health care in UDCs [1-22]. Most of these authors have limited their analysis directly to the model of health care, and have only indirectly approached the question of medical education. However, as we have argued, the two are very closely related.

Most of the present UDCs were, at one time colonies of the western nations. Their economic and social systems have been greatly influenced by the colonialists and despite their 'independence' they still follow closely norms and regulations left behind by their masters.

When the colonialists first took over, the overall society and economy of these countries were transformed, and the medical and health facilities were brought in line with the changing 'super-structure'. The colonial administrators required a model of health care which would cure the ills of their own people, their military and their bureaucrats. They thus set about 'importing' medicine from their home country and actively built up this 'western' type of health care, usually at the expense of the indigenous system which had existed earlier. As a select few of the locals were incorporated into the closed circles of the colonialists, a new elite was formed. Members of this small clique were also able to afford some of the luxuries brought by the westerners, one of which was the access to western medical care. When the colonisers left the foreign lands, the local elite had been so 'westernised' that they emulated their masters in practically all fields [1, 7].

The pattern of health care that has evolved in most of the capitalist UDCs is one based on curative care, and the workings of the socio-economic and political systems are such that health care has come to cater essentially for the rich and the elite [2, 8]. This model of health care has a predominantly urban bias in the distribution of facilities, and thus the majority of the population, usually rural, are denied the right to have access to health care [15]. And, it is not all the urbanites who have access to health care. Since medical and health care is sold like any other commodity in the market, most of the urban poor cannot afford the escalating costs of medical care either. In underdeveloped capitalist countries, we have argued that the socio-economic system, with its resulting class structure is largely responsible for this type of urban based elitist model of health care [8]. This model, along with a general low priority given to health care and disease elimination is responsible for the very high communicable disease pattern in these countries. However, there are a few UDCs which have at least made sincere attempts to solve the problems of their people.

The cases of China, Cuba, and Nicaragua are worth citing. In all these countries, there has been an improvement in the health status of the population. The infant and child mortality rate have fallen, facilities have come to be more equitably distributed, health services are free etc. [2 27], Mozambique too, is following a similar path and in dications show that the health status of her population i also improving [28]. What is important to point out her is that these countries have not only had a change of gov ernment, *but there has been a substantial transformatio in their economic structure*. They have gone from a no socialist mode of production (form of the economy) to socialist one, where the distribution of power and re sources rests with the people and their true representatives The people have collectively been able to decide what i best for them and have taken action for their own better ment and welfare without having to confront a hostile rul ing class. This importance of the change in the mode o production has been emphasised by Navarro as he argues "abundant empirical evidence exists to show that the mos important changes in the health of the underdevelope countries' populations during the last 20 years have oc cured in revolutionary Socialist underdeveloped countrie via changes in their economic, political and social struc tures, independently of and outside the health care sector [11, p. 169].

In underdeveloped capitalist countries, for the function ing of the inequitable and elitist model of health care, th medical college has provided just the right graduate: doctor who can function within the norms as defined b that society. Just as the economy of a UDC is closely tie in with the larger movements of the international econ omy, and is dependent on the developed countries, so to is its system of health care. Similarly, the medical colleg is linked closely with the pattern of medical education i the dominant (often ex-colonial) country. This is despit the fact that the real needs of the UDCs, as defined b their disease patterns and limited resources, are differen from the DCs.

Even in Tanzania after the Arusha Declaration, the cur riculum in the medical schools 'mimicked' that of th West with a content which is clearly unsuitable to th needs of the local environment. A major factor whic determines the need to achieve an 'international' standar is the faculty. This desire for acceptance by university authorities in the West, forces them to adopt western con cepts of 'academic standards'. The result is that "much o the curriculum is thus objectively being determined from outside the country" [16, p 47; also see 6,8]

Gish [14], Gish and Godfrey [19] and Horn [18] have shown how this type of western-oriented medical educa tion results in a 'brain drain' of professionals to the devel oped countries. Gish and Godfrey argue that due to in equities in the functioning of the market, medical care i also skewed in a manner which suits the rich. The pro spective doctor goes through an institution "whose 'stan dards' are generated by New York and London and ar mostly unrelated to the problems and possibilities o UDCs" [19, p 6]. The reason for this is that the bourgeoi

ie, who controls most of the resources in a country, requires the latest and best in medical care and thus try to roduce 'comparable' doctors at home [2]. This internaionalisation of doctors only helps the developed countries. The migrating doctors subsidise these countries as they do ot have to go through the expensive process of producing heir own doctors, while the social cost of producing them s borne by the poorer UDCs.

Not only does this internationalisation assist migration, ut by maintaining foreign standards, severe internal disortions also arise. Since medical students are taught their raft in hospital settings, as is done in the West, they often fail to interact with 'communities', both urban and ural and thus remain ignorant of the social causes of disease. Since the disease patterns in UDCs are quite different from those in DCs, the way to deal with them must lso be different. Medicine taught in the hospital setting is often not sufficient to deal with the complexities of disease in UDCs. The unfortunate outcome of this type of medical education is a hospital-oriented doctor who has been taught to function in urban settings with the help of modern and sophisticated technology. With such technologies and facilities lacking in rural areas, a large number of doctors would choose not to go there, thereby denying the right of the rural population to have access to doctors. With the concentration of doctors and facilities in urban areas, the limited finances of the health budget are spent here, where only a minority of the population lives [8,20-22].

A factor closely linked to the functioning of urban based doctors having a primarily curative approach, is the prescribing of drugs in great abundance. Since medical care, as it is practised, is linked with the doling out of medicine, this type of doctor and health care model also contributes in supporting the drug industry. The drug industry in most UDCs is foreign owned and acts as a further link in the exploitation of the UDCs by the West [29. 30].

Another important aspect of medical education has been lucidly examined by Banerji [1, 6, 7]. He says that in the course of their medical education, the students "who mostly belong to the upper classes, get further alienated from the masses of the people" [7, p. 33]. The colonial character of the health services, affecting medical education, also played its role in "shaping the value system and the social outlook of the Indian physicians" [1, p. 1334]. This class based alienation makes them further dysfunctional in the UDC, especially in the rural areas and urban slums, where due to their class position, they are often not able to relate to the poor. The doctor thus produced cater primarily to the elite of their country, or then, go off to the West or the oil-rich countries where they feel more at home professionally (and often even socially)[2][21].

This 'western' model of health care and medical education has been uncritically adopted by most UDCs. Thus the case study presented below, although specific to Pakistan, will clearly echo the situtation prevalent in other UDCs.

Case of Pakistan

Up to 1947, what are now India and Pakistan, were one country ruled by the British. Any history that they had until that time, was broadly the same, albeit, regionally specific in character. In the field of health services too, this is largely true with the exception that what is now Pakistan, had a greater influence of Muslim and Arab culture than did present-day India.

Debabar Banerji is a leading authority in the field of social aspects of medicine in the sub-continent. He has written extensively on the historical evolution of medical and health facilities in India and has shown how British imperialism imposed its values on Indian society and trampled on the indigenous health system that had existed until then. The colonialists developed their own system of health care (the 'western' system) and recruited a select few of the local elite to take over the entire political and administrative system after they left in 1947 [1, 6-8].

The resulting medical and health services system inherited by Pakistan is one which is modelled on the West (in particular Britain), being primarily hospital-oriented and based in cities. More than 90% of health facilities are in urban areas and the disparity shows no sign of improving [8]. The medical colleges in the country centre around this hospital-based approach to health care and look towards New York and London for guidance and inspiration.

There are at present 17 medical colleges in the country[3] with an annual intake exceeding 4300 students (there are at present more than 22,000 students enrolled). Two of these are exclusively for women while all the others are co-educational. There has been a great increase in the number of medical colleges in the last decade mainly due to the populist rhetoric of the Bhutto Government— in 1971 there were only seven medical colleges in the country. Some of these colleges were set up purely on political expediency, in cities which lacked even supporting infrastructure (eg Nawabshah, and Larkana—Bhutto's home town). Due to excess production, the present government has not only put a stop to the increase in the number of medical colleges, but has also decided not to increase the admission capacity of the existing colleges. *Ad-hoc* and anarchic policies, usually short-term, appear quite regularly, and despite weighty five-year and annual plans, there is seldom, if any, planning at all.

The curriculae of all the medical colleges in the country are identical and the colleges come under the aegis of the Pakistan Medical and Dental Council (PMDC). This body, apart from regulating and streamlining medical education, also looks at the ethical aspects of medical practice

Table 1: Allocation of Teaching Hours to Various Subjects in Medical Colleges in Pakistan

Serial Number	Subject and year	Total number of hours	Percent	When examined
Years I and II:				
1.	Anatomy with histology	800	24.5	1st professional
2.	Bio-chemistry	200	6.2	1st professional
3.	Physiology	600	18.5	1st professional
4.	Human relations, sociology, community orientation, medical ethics	100	—	—
5.	Pakistan studies and islamic ideology	100	3.1	1st professional
Year III :				
6.	Pharmacology including therapeutics	300	9.2	2nd professional
7.	General pathology (microbiology parasitology)	300	—	3rd professional
8.	Forensic medicine and toxicology	60	1.8	2nd professional
Years IV and V :				
9.	Community medicine (IV year)	100	6.2[1]	3rd[1] professional
10.	Medicine including applied physiology	145	4.8[2]	Final[5]
11.	Surgery including applied anatomy	145	5.1[3]	Final[3]
12.	Orthopaedic surgery	20	—	—
13.	Obstetrics and gynaecology	80	2.5	Final
14.	Paediatrics	50	1.5	—
15.	Opthalmology	30	0.9	Final
16.	E.N.T.	30	0.9	Final
17.	VD and skin	10	—	—
18.	Pathology (general and special) and microbiology and parasitology (IV year)	100	12.3[4]	3rd professional
19.	Clinico-pathological conference, orientation, etc.	80	2.5	—
	Total	3250	100.00	

[1] Includes no. 4. [2] Includes no. 17. [3] Includes no. 12. [4] Includes no. 7. [5] Includes no. 14 and no. 17.
Source : (31)

and acts as a control on malpractices. The body consists of senior professionals in bureaucratic positions and the principals of all the colleges. For all practical purposes, the PMDC does little work that is of any profound significance to the system of medical education. However, it does exercise some control over the curriculum of the medical colleges and determines the courses to be studied. The last major change occurred in 1975, when the PMDC laid down the present curriculum for the MBBS degree. Since then some insignificant changes have been made, notably in the shifting of the subject of community medicine from one year to another. Another recent change is the introduction of Pakistan Studies and Islamiat (Religious Studies) in the first year of medical school [31].

Education in a Medical College

A student enters medical college after 12 years of schooling, the last four of which have already determined the choice of the student (or in most cases, his parents') towards medicine. However, a miniscule proportion of those who in their ninth year of school opted for medicine eventually get to medical college. Further, admission to medical school is not limited to merit, as a quota system exists which permits some second class students to enter.[4] Thus competition from an early age is fierce, and only those who excel, or have the right connections, or right regional or social backgrounds, are admitted.

The medical degree, MBBS, is spread over five years with four professional exams. Years one and two constitute the course work for the first professional exam, with a professional exam each year for the remaining three years (see Table 1). Clinical teaching starts from the third year, where students are supposed to spend 2 or 3 hours a day for a period of nine months with one month per ward. The third year group is taught how to examine patients but is not given lectures on diseases and is largely selftaught. Attendance to the wards is compulsory, as it is to classes, but as the group gets larger because of bigger intake, it gets more unmanageable and as learning by the bedside gets more difficult, more and more students stay away. Eventually only the core group of bright and eager ones remain, while the ones with lesser competence who need more attention stay away.

Community medicine is rarely given much importance

in UDCs, and Pakistan is no exception (see Table1). Previously, there used to be 'field trips' in the subject which took students to see sewerage plants, rural health centers, and other such institutions. Even then, community medicine had a 'curative' institution bias. Rarely did the students interact with a 'community', whether urban or rural, and often these trips were considered 'fun trips' and 'outings'. Now this procedure has been replaced by discussions and seminar groups for a period of one month each year. Thus, the discussions by the alienated students relates to 'communities' of which they have no first-hand knowledge. Due to a lack of training in the social sciences, they are also unable to see the social mechanisms at work in the environment. Even the patients that come to the wards are usually from urban backgrounds, so exposure to rural disease patterns is totally lacking [20, 21].

Further, the students are not taught in detail about common diseases such as typhoid and malnutrition, but instead, surgery, pathology, etc are emphasised. The students are advised to specialise in subjects which offer lucrative returns. A post-graduate in community medicine may be more qualified to deal with diseases in a poor rural community, but he would indeed have a hand-to-mouth existence. There is no social value attached to community medicine in this society and little or no demonstration effect exists. Thus, for students to reject community medicine and specialise in neurosurgery is sad, but nevertheless, understandable.

Lending facilities in the college libraries are poor and so students have to buy most of their books. Nearly all books are written by western authors and thus are fairly expensive, although now most of them are printed in Pakistan, or published in the Far East. In the first year a student is required to buy the greatest number of books which are also the most expensive. 'Gray's Anatomy' alone costs close to Rs. 700 and the bare minimum cost for books in the first year comes close to Rs. 1700. If a student wishes to purchase medical 'atlases', he must spend a great deal more. Further, the desire for 'latest' books means that since editions change very fast and the material changes as well, students cannot usually work with second-hand books from their senior colleagues. By the end of the final year, the students have spent between five to seven thousand rupees for their very basic books and if they want a few more necessary texts, they must spend further Rs. 3000-4000. The costs in many individual cases can be substantial.[5]

At the end of the five years in medical college (which in Pakistan due to 'disruptions' usually extends to seven),[6] the students are supposed to do a 'House Job' (internship) for a period of one year. Six months are spent as a junior, while the other six are spent as senior house officer in the same or another speciality. Again, the opportunity to work in a certain ward is based on merit, with about 30-40 doctors per ward. Of these only a few are paid, while the rest must be honorary.

The basic issue with which we start our criticism of the model of medical education is that of language. The medium of instruction in all medical colleges in Pakistan, is English; Pakistan, like India, is a country with different nationalities and cultures, each region having its own corresponding language. Although the official languages are English and Urdu, the entire population cannot speak Urdu, leave alone English. The regional languages have preference over the official ones, especially in the interior of all the four provinces. Further, only 26 percent of the population is literate (in any language). Thus, of those 26 percent one can presume that very few would be able to read and write English. Even fewer would have English as a mother tongue. Moreover, although medical education is in English, schooling can be in any regional or national language. A student may speak his mother tongue at home, he may use another language for primary and secondary education, and yet a third for professional education. That means that although a student has spent 12 years of school life in a language other than English, he or she will be confronted with a 'foreign' language once he enters medical college. This foreign medium of education means that very few students from per-medical schools will actually be able to learn much in medical colleges. This preference for English shows a bias towards the elite and westernised urban based minority who are accustomed to English in their homes and educational institutions. Members of this elite, apart from being able to learn more, and with much more ease, claim the best house jobs, followed by the most lucrative job offers. Thus, discrimination on a class basis is reinforced through the medium of instruction in medical colleges. Further, if medicine were taught in either the regional or national language, the international mobility of doctors would fall dramatically. This is a situation which the elite, whether doctors or laymen, will not readily accept [21].

The problem of language is not restricted to the lecture halls alone. Students have to take histories from patients, if not in the mother tongue of the patient, then in the local or regional language. A student who does not even know the names of the most basic diseases in the national language, will have substantial difficulty in finding out what is bothering the patient. There will be very little communication between the two, if at all. Langauge, however, is only a minor barrier compared to the cultural barrier that exists between the patient and doctor. In most post-colonial societies, a separate 'culture' exists for the elite, and even a mastery of the language will not necessarily close the cultural gap between the two [21].

The books that are used in medical colleges in Pakistan are in most cases written by foreign authors—mostly American and British.[7] These books cater, primarily, to a western audience in medical schools in developed countries. They are written in, and for, a specific socio-eco-

nomic culture and environment dealing with a particular health and disease pattern. The fact that they are used in UDCs without any changes, causes a few problems. Since the authors have the DC student in mind, quite naturally they talk more of diseases found in the West than in Pakistan or other UDCs. The main diseases in Pakistan which are caused by infections and are communicable have more or less been wiped out in the West. Further, a great number of diseases in UDCs have their roots in social and economic conditions which are far removed from the hygienic western hospitals in the countries of the authors. Thus, some diseases which are very common in Pakistan, such as typhoid and diptheria would be treated as 'interesting and rare' cases in the West, and would not be given the importance they deserve in the texts.

The average size of a class in medical colleges exceeds 250 students— in some colleges it is more than 400.[8] With such an unfavourable student-teacher ratio, it becomes very difficult to learn anything in class. Further, the audio-visual facilities that exist in all medical colleges are very poor, and thus most of the students are in effect, not participating in the learning process.

One important factor which upholds the existing system of education is the role of the teachers. With very few exceptions, all are foreign qualified. In fact, it is very helpful for teachers to be foreign qualified if they intend to rise to the post of professor.[9] These tutors lead their students through the course they went through— first education in Pakistan, followed by essential foreign training to learn the latest teachniques. These students if they come back, either end up in large hospitals in the city or else attempt to go and settle abroad where lucrative jobs await them.[10]

The irony of the medical education system is that with 4000 new graduates a year, not all can be absorbed in the existing health system. This leaves many unemployed, and the numbers keep on increasing at a very fast rate indeed. This expanding cumulative unemployment arises despite the fact that very few people in rural areas have access to doctors who tend to converge in the more lucrative urban areas. The medical education system has taught the doctor to deal with sophisticated equipment and modern technology. In a rural area he is completely lost without his tools. Further, the disease pattern is also different, and he may find that unless he is aware of rural sociology, politics and economics, or is a native of the rural areas, he will not be able to function effectively [8, 13, p. 217, 20].

The examination system in medical colleges acts as a major contributor to the poor quality of doctors produced. With the emphasis on essay-type exams held at the end of the year, with journal work and orals (viva-voce) playing a small part, irregularities are quite widespread.

It is not possible to assess exactly the amount of cheating, but one can, on casual observation, clearly see that it is quite significant. One observer quoting medical students, wrote in a local newspaper: "there was a question on typhoid ... we ignore small items. We prepare diseases which have complex, lengthy treatment so we could fill up pages. Typhoid has a simple treatment. Nobody bothered to study it. We strongly protested (to the invigilator) and cheated, of course" [32]. (This happens where every third day, six or seven cases of typhoid turn up in the wards). It is estimated that as many as 90 per cent of the students cheat. Cheating is not only limited to written exams, the oral exams, which should be a safeguard against cheating, are also subject to unfair means. There is a case where a student got a distinction in a subject by giving his tutor a diamond. Other students have been known to arrange for foreign trips for their teachers, while still others have paid for the petrol of their teacher's car for the whole year. Cheating in educational institutions of all types, at all stages is epidemic, yet few active measures are taken to deal with the problem.[11]

There is an anomaly which is probably unique to Pakistan. Some medical colleges in the country, although functioning under the PMDC regulations are not recognised. The degrees of the Chandka Medical College, set up in 1972, are as yet not acceptable to the post-graduate medical centres of the country. Two other colleges which have been functioning for a number of years have only recently been recognised. This essentially means that a student may complete five years of medical school and yet be legally unable to practice medicine.[12]

The present government of Pakistan has repeatedly played the nationalism and religion 'cards' as a means to extend its rule in the country. It has thus introduced the subjects. Pakistan Studies and Islamiat, in the curriculum of medical colleges. In fact, of all subjects taught in the first year they are probably the most important. If a student fails in either of the two he or she will not be allowed to reappear in the subject and will be declared failed in *all* subjects. Apart from the argument that religious studies have nothing to do with medicine, the level of instruction in these two subjects is similar to that of intermediate (class XI and XII), and is thus a repetition of the previous years. However, in this case, they not only add to the burden of work, but with so much importance granted to them, cause unnecessary anxiety.

Although the problems mentioned above may be specific to Pakistan, many UDCs can find some similarities. However, the level of debate concerning reforms in the medical system in this country, is of a very poor standard compared to other UDCs, such as India.

Since health care itself is not considered an important priority of the government—the health sector gets only 0.6 percent of GNP—any issues related to problems within the health system receive even less attention. Very little research is done in Pakistan which deals with problems related to medical education. Nevertheless, a few

government publications do exist which indicate the attitude of the doctors and concerned bureaucrats. However, since they echo the elitiest bias in medical thought, the recommendations if followed, can prove quite disastrous to the welfare of the masses of the country.

A commission set up in 1960 (33), to study the medical and health sector came up with some recommendations dealing with medical education. Some salient points of the report are worth noting.

The report recommended that "since children of medical practitioners will have seen at first hand what will be expected of them by the community, therefore a bias towards the children of medically qualified parents (in the case of admission to medical college) should be exercised" (33, p. 46). Such an attitude is reflective of the medical lobby which wishes to perpetuate its own hold on the profession. The prominent professors and physicians who control the health system wish their offspring to enjoy the fruits which they have tasted. The class nature of medical professionals is thus further re-inforced. (21).

This is evidenced by another recommendations which accepts the fact that many students' "knowledge of English is insufficient for them to profit from their course of studies" (33, p. 56). Rather than suggest a conversion to the mother tongue of the students, the writers of the report urge the teachers in medical schools to give their students "practice in speaking, reading and writing English" (33, p.56). The elite, who are fluent in English and need no 'practice', would nevertheless have an upper hand in the system.

The elitist bias is further revealed by the fact that the report gives only four lines out of 20 pages to community medicine. This is so because the elite amongst the doctors are the last who will need to see a rural community or an urban slum, since most of their clients will be well-to-do urbanites. Thus even if they were taught community medicine, they would have little opportunity to put it to practice.

The western-orientation of medical education in this country is further reinforced by the recommendations of the report. It suggests that the more 'enterprising' men and women who can make the 'necessary arrangements' should complete their training in the United States or Britain. In fact, another report goes even further.

Ahmed (34), argues, that not only should the physician training programme maintain international standards of quality, but since the cost of producing medical personnel is low, the world price is high, "the setting is ideal for developing an export market" (34, p 12). The object of medical education, according to the author is to "produce a graduate within our resources who is accepted internationally" (34, p. 13). (The report was funded and published by the Public Health Association of Pakistan!)

There exists little consciousness about social issues in this country, either at the political/bureaucratic level, or at the mass level. Further, with a dictatorship at the helm of government, any semblance of debate and dialogue if it gets underway, is heavily biased in favour of the existing status-quo. The media is totally controlled by the government, where inhabitants of the country are given their daily dose of 'newspeak'. With such an atmosphere existing within the social conditions of the country (lacking any significant opposition), any reforms that take place will be similar to those mentioned above. They will be totally cut off from social reality and will at best be only 'cosmetic'. Thus, to await reforms from the ruling class to suit the masses, is both native, and unrealistic. As long as 'things are in control'. and the status-quo remains stable, the government have no need to cater to anyone but to those whose interest it serves.

Possibility of Reforms

As the title of this section suggests, we will deal with recommendations for reform in the medical education system in UDCs. We will essentially deal with the suggestions put forward by Gish and Godfrey (19). We feel that their recommendations are indeed ideal and if followed through would result in an excellent system of medical education and health care which would fit the requirements of UDCs almost perfectly. As we proceed to show, however, their recommendations are good only on paper and as they have ignored the social and political forces active in UDCs, cannot be implemented in capitalist underdeveloped countries very easily.[13]

Gish and Godfrey start their paper with a critique of neo-classical reforms rejecting the framework on which they are based. Their alternative framework accepts an international market for professional skills into which UDCs are well-integrated. Their suggestion is a withdrawal from the market, essentially arising from a changed focus in educational policy which should deal with internal needs rather than external markets. They have presented some specific recommendations to which we now turn. (Their paper deals primarily with UDC commonwealth governments.)

The authors have given 11 different recommendations for UDCs which are summarised as follows: (i) an end to use of British qualifications; (ii) no more foreign professional examinations in UDCs and an end to advertisement and recruitment by developed countries; (iii) disaffiliation from western-dominated international professional associations; (iv) permission for students to go abroad only on 'relevant' courses. (v) the development of local courses and qualifications which are more suitable to local needs and thus less acceptable to the western employers— a 'de-internationalisation' of doctors and medical education; (vi) regional cooperation for higher education; (vii) the use of the national languages as the medium of instruction. (viii) improved rewards and job content; (ix) various controls to dissuade overseas study; (x) rejection of various, other

(outside the health sector) interests; and (xi) the restriction of the output of doctors in UDCs to the number that can be absorbed at home (19, pp 8-10).

Let us now proceed to examine each of their recommendations. Firstly, an end to British qualifications must take place not only at medical college level, but also at school level. At present the vast chain of 'O' and 'A' level schools all over the commonwealth offers the elite the opportunity to acquire British education while sitting at home. They have a great deal to lose by denying themselves this privilege and one sees no reason why they should give this up. Again, the author's second point: although Pakistan has ended the sitting of foreign professional exams in the country, those with money can easily fly to London or San Fransisco and take the relevant exams there.

Recommendation (v) requires substantial changes in the model of health care. Of course, UDCs should have locally specific courses so that they can function in the local environment, but again, as has been argued above in the way the class system exists, the rich want a certain type of doctor who is well acquainted with the latest and best techniques in major hospitals in the East, and not in the poor areas at home. It is quite clear that the doctor produced in UDCs favours and belongs to certain class, and this class, in all essence, determines the type of doctor to be produced and supports the 'international' curriculum (1,2,8,21).

Instruction in the national language, as we have shown above, also chips away the advantage of the elite for whom English has become a mother tongue. By introducing the national language (which is itself controversial, say in India), members of the lower classes will have access to the domain of the elite, again a hard-won privilege which they will not give up easily. Further, UDC governments can if they wish, discourage overseas study, but if a monetary mechanism is used, the rich can over-ride it. It seems doubtful that any other means will be used, especially since the children of the elite are the ones who are most likely to go abroad. Even local production cannot really be restricted, as the burgeoning middle classes will clamour for their rights as well.

Essentially, the above discussion looks at the relationship of the elite (the dominant class/classes) with the government. We argue that the dominant class has substantial control on the government and on the distribution of health resources in a country (2). Further, in the absence of any significant challenge or opposition, we see no reason why the ruling class should carry out policies to hurt its own interests. This is mainly what Gish and Godfrey have recommended—the government working for the 'masses' at the expense of the elite. This is clearly a problem in underdeveloped capitalist countries. However, in countries where there has been significant social change and mass participation and genuine democracy has resulted in the control of the people of their own destinies, these reforms are possible. Mosambique is an example of a country in which such change has occurred and it has carried out some of the reforms recommended by Gish and Godfrey. They have 'de-internationalised' their doctors, teaching them more about their own country than about the colonial nations. This has resulted in a more socially conscious, 'new' doctor, required by and suitable to the needs of Mozambique (28, 35).

We have analysed the issues involved in the model of medical education in UDCs, and have treated Pakistan as a case study. The factors that come out most clearly are that medical education is a reflection, in the final analysis, of the socio-political structure in the country.

The present form of medical education in capitalist UDCs is elitist in nature and is a major impediment to an equitable distribution of health care. This type of medical education, often in a 'foreign' language, favours the dominant classes and produces a doctor who works best in an urban-hospital setting either in the home country or in the West. Such a doctor is heavily incapacitated in rural settings, as he has not been trained in line with the needs of the country.

The case of Pakistan is peculiar in some cases, but in most of the broader issues concerning medical education, she is like other dependent UDCs. A lack of clear planning and the interests of those in power have often determined the path of medical care and the growth of medical educational institutions. The system of medical education is an important factor in the health care package and thus requires a restructuring to suit the true needs of the people. Clearly, mere rhetoric on the part of the government will fail to achieve this aim. What is essentially needed is a change at the political and economic level which will in turn affect the health care system and the system of medical education, and will thus determine new priorities. In a new society, a people-oriented package is to be devised, in which a newly designed medical education programme should play an important role alongside other ingredients of the health matrix.

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Notes

Our discussion is stricted to underdeveloped capitalist countries and we have purposely ignored developed countries. It is true that in advanced capitalist countries health care is fairly well distributed and accesssible to all, but this is a different issue, and we believe that comparisons between DCs and UDCs (whether capitalist or not) are quite irrelevant and out of context.

2 It must be emphasised that it is not doctors who are at fault, but the class system by which they are produced and in which they function.

3 Of the 17 colleges, all but one are government owned. The Aga Khan University is the only private University in the country and is linked closely with McMasters, McGill and Harvard Universities. It however also follows PMDC regulations, but has the 'advantage, of not only foreign trained personnel, but expatriates on their faculty.

4 Each college has its own 'quota system'. A certain percentage of seats are given on merit, while the others are re-

served for the children of: Military personnel, ex-service men, employees of the Education Department; and for students who have done well in extra-curricular activities and for students of underprivileged areas (these are usually termed 'rural' seats).

5 Ussi=Rs. 17/- annual per capita income in Pakistan is $335.

6 The colleges, due to local (college) or national politics and disturbances, are closed for many weeks each year adding up to a minimum of two years in a medical students college life.

7 About four of the 20 'essential' books are written by Pakistani authors. There is an unfortunate twist to this, in that the few books written by Pakistan authors are unfortunately of extremely poor quality, but are nevertheless, made compulsory if the author happens to be teaching the course.

8 The Army Medical Collge in Rawalpindi run on very disciplinary (military) lines, admits only 100 students a year. Liaquat Medical College in Hyderabad admits 447.

9 Of the 19 full professors at the Army Medical College, only three were not foreign qualified. The three are professors in the relatively less important subject of forensic medicine, biochemistry and physiology.

10 As many as 50 percent of doctors produced in Pakistan are abroad.

11 The author on a visitor to medical college found every student sitting in the corridors diligently working away. On no previous visit had the author seen students so busy. On enquiry it was revealed that each and every one was making notes to pass on to students in the examination hall.

12 The PMDC reiterates its claim that the level of teaching at these colleges is not up to 'standard' and thus their doctors are not 'properly' qualified.

13 Although Gish and Godfrey's recommendations are meant to reduce the exodus of physicians from UDCs, we feel that since it is the education system which causes the migration in the first place, their recommendations need to be discussed as they are extremely cogent and worthwhile.

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Defining Quacks

CONSUMER Week this year was celebrated by meetings organised by several organisations such as the Consumer Guidance Society of India, Grahak Panchayat etc on health and health related issues like medical care and quackery, responsible medical practice etc. While these are commendable efforts at consumer education, the process can never take off unless certain uneasy questions are confronted.

Is it enough to define quacks as those who do not have appropriate degrees and qualifications? Such practitioners are, of course, quacks. But there are also those who practise 'quackery' even though they possess requisite qualifications and degrees. These are the properly registered doctors who pursue irrational practices and therapy. We illustrate this with just two instances :

(a) Several surveys and our own experience shows that a majority of patients who approach doctors receive injections regardless of their ailment. Is this rational practice? Medically, injections are given only in three situations—life threatening conditions; when the patient has severe vomiting and cannot retain oral medication and; when the drug is not available in oral form, such as insulin. Aren't these doctors who prescribe injections indiscriminately also 'quacks' of a sort?

(b) Such quackery became even more visible during the recent controversy regarding high dose estrogen progesterone (HDEP) drugs. No standard text book of medicine or pharmacology recommends such HDEP drugs. Moreover, they are known to cause serious harm to the foetus when taken by pregnant women. And yet, this drug with a multicrore-rupee market was freely prescribed and used by doctors not only for pregnancy testing but even to induce abortions. Further, when the Supreme Court ordered a public enquiry to decide on whether the irrational and potentially harmful drug be banned, some of these doctors chose to give glowing testimonials in support of the drug. Is this responsible medical practice or is this 'quckery' to help the drug industry?

The Medical Council of India is charged with the responsibility of regulating medical practice which includes curbing quackery. What has it been doing? It has never come out against irrational practices such as the propogation of the 'injection culture' by doctors; it has kept a dubious silence on the issue of the doctors' role in pushing hazardous drugs; and even worse, it has not bothered to take action against the doctors which the Lentin Commission had named as being responsible, by their negligence, for the tragedy at the J.J.Hospital. One may legitimately ask: Is this a body to enforce medical ethics or a body to legalise quackery?

Of course, the MC does take prompt action on certain issues such as promptly de-registering a non-practising filmstar doctor for advertising. Or more recently, the Maharashtra Medical Council issued a statement 'threatening' the doctors who supported Dr Bal in his fight against victimisation with 'dire consequences'. His supporters, it will be recalled are agitating against the sinister role played by Dr Sudhakar Sane in his personal capacity as Vice President of the Managing Committee of Dhanvantri Hospital from where Dr Bal was dismissed. Dr Sane happens to be the current president of the Maharashtra Medical Council and so the MMC sought to provide protection for him for his personal ill-deeds.

Why was Dr Bal victimised by Dr Sane and his friends in the managing committee of Dhanvantri Hospital? Because he is the secretary of ACASH, a consumer organisation which along with others sought to get the HDEP drugs banned, started a campaign against the unscientific claims made to sell analgin by the industry and so on. Thus so-called qualified doctors and their premier body have chosen to victimise those who are fighting against the quackery of medical professionals.

It is really ironic and tragic that in the consumer week the president of the Maharashtra Medical Council was invited by the CGSI to speak on Consumer Education in Medical Practice. Not only that, the CGSI which supported Dr Bal and the drug consumer movement till recently has decided to dump both Dr Bal and the campaign for rational use of drugs in favour of such medically-organised quackery. We cannot help wondering at the kind of education that this protector of the high priest of medical quackery will give to lay people. In any case, do people who either indulge in this sort of 'quackery' or give them protection by refusing to confront the issues have any moral right to be part of consumer meetings? They are really the 'accused' and not the 'educators'.

Isn't it time to take the bull by the horns and confront the medical establishment with these issues?

(Press release from Medico Friend Circle, Bombay Group on March 18, 1989.)

Rural Doctors in Thailand

IN accord with a world-wide change in attitude about health services the government in Thailand has adopted a health policy centred on community services and a better balance between prevention and cure. However there are problems with the implementation of the policy. These problems were raised at a seminar held recently in Bangkok about the role of community hospitals in public health development. Jointly organised by the Rural Doctors' Association (RDA) and the Ministry of Public Health (MOPH), some 400 rural doctors attended the seminar.

The government policy, as laid out in the previous Fifth (1982-1986) and current Sixth (1987-1991) National Health Development Plans, talks of participation in development, basic minimum needs, primary health care, decentralization and intersectoral collaboration. Nobody disputes the soundness of the policy. And few would dispute the progress made to date. The number of doctors in the rural areas has more than doubled over the past six years. This year 63 per cent of the health budget will be spent on rural services, compared to 43 per cent in 1981. All villages have local village health personnel, and almost all districts have hospitals. In general, the government's policy is well approved of and is having some positive results.

The RDA though is critical of the actual implementation and argues that the potential positive effects have been hampered by a budget that does not adequately reflect the policy, and poor education for all health personnel about the principles of primary health care.

As already mentioned, over the past six years the number of doctors working in the rural areas has more than doubled. However as the chairperson of RDA, Dr. Supatra Sriwanichakorn pointed out, "This still represents less than 10 per cent of the more than 14,000 doctors nationwide while more than 80 per cent of the population are rural residents." Thus in the north-east of Thailand, the poorest region, the ratio of doctors per head of population in 1984 was 1:15,554 while Bangkok could boast a ratio of 1:1,321.

In addition to this only 45 per cent of these rural doctors have worked there for more than two or three years. The government currently requires medical graduates to work in a rural hospital for three years after graduation. Thus the majority are relatively inexperienced and rush back to the city after their compulsory rural service.

A further concern of several speakers at the seminar was the dehumanising effect of the modern medical system. Several speakers reiterated the need to inject 'spirit' into the practice of medicine. Contemporary medical education is often centred on accomplishing skills at utilizing medical technology, ignoring the inter-dependence of body, mind and spirit. Thus, training of all health personnel is inadequate in instruction on both the principles of primary health care and the dependence of physical health on social and spiritual well-being.

While it is true that considerable gains have been made towards achieving equity in health expenditure, further redistribution is essential if the health status of the poorest Thai people is to improve.

A former chairperson of RDA and now a member of the Health Planning Division, MOPH, Dr. Suwit Wibulphonprasert explained this further. "If the proportion of the health budget spent in rural areas, now a relatively fair 63 per cent of the total, is dissected further it can be seen that half of it goes to provincial hospitals and more than two-thirds of the remainder goes to district hospitals." Thus the vast bulk of the budget is used for hospital services.

Now is the time to concentrate on health services at sub-district and village level. The projected 9 percent increase in the 'district/sub-district' item of the health budget will almost all go to the sub-district level. There are plans to employ nurses in all the Health Centres as well as to increase the availability of Mobile Health Teams for weekly visits to the Health Centres. However, should this become merely an outreach extension of the hospital it cannot be considered a true diversion of funds towards primary health care.

The RDA is also advocating more autonomy of district hospitals so that decisions about implementation of policy can be made locally with local conditions in mind. Decentralisation is the key-word. "But you have to differentiate between delegation and decentralization" Dr. Suwit cautioned. Delegation is handing down the responsibility for some decisions from one officer to another. Decentralisation should go hand-in-hand with full community participation. That is, power should be devolved to the recipients of health services.

The Rural Doctors' Association is certainly not disputing the general direction of the government's public health strategy. They do believe though that much more could be done to accelerate the health development of Thailand— for all of its people.

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Private Sector in Medical Care
(A Brief Survey)

rama v baru

The increasing penetration of high technology equipment is making medical care a profitable venture and has provided a fillip to the expansion of the private sector, which in health care comprise clinics, nursing homes, hospitals, pathological labs and diagnostic centres. What are the factors which have led to this development? What are the implications for health care?

WHILE only a few years back there were hardly any hospitals which offered super specialist services outside major metropolitan centres, now a large number of private hospitals and diagnostic centres have come up in all major cities. Some of these organisations are corporate enterprises which are run like regular business concerns by floating shares in the market. Big business groups like Tata, Hinduja, Modi and Escorts and regional groups like Standard Organics Ltd in Hyderabad and Apollo Hospitals Ltd. in Madras have diversified into Medical care

Whether in larger hospitals, nursing homes, diagnostic centres or pathological labs, high technology medical equipment like scanners nuclear gamma camera, lithotripers, auto-analysers and the like have come to play a crucial role for diagnostic and therapeutic purposes. Nearly 80% of all medical equipment is imported through companies like Siemens of Germany, General Electric of USA, Dornier and Hitachi.[1] Although equipment costs are high, imports are rising quickly. While in 1980 alone Rs. 20 crore worth of equipment was imported, by 1986-87 it had risen to Rs. 65 crores. According to an estimate, imports are expected to rise at the rate of twenty percent annually for the next three years. The trend of increase in import of high technology medical equipment is essentially a fall out of the liberalisation of procedures by the Government on import of technology. In the case of medical equipment the government has reduced import duties from 107 per cent to a mere 40 per cent. In addition, total duty exemption has been granted to hospitals and diagnostic centres willing to treat at least 40 per cent of their patients free of cost. In the case of non-resident Indian (NRI) investors exemption from import duties is granted if at least 25 per cent of the patients are offered free treatment.

The liberalisation of import duties coupled with increase in the income of middle and upper middle classes has resulted in the demand for consumer durables and luxuries. This, naturally, has had an effect on health care as well. A number of large projects have been initiated and several existing hospitals are being expanded and upgraded by business groups and private trusts across several States in the country.

According to a market survey report by a leading pharmaceutical company, in Uttar Pradesh, the Modi group of industries is establishing a super specialist hospital in Modinagar with emphasis on specialities like paediatric, cardiology and cancer treatment. The project is valued around Rs.200 million and is nearing completion. Apart from this several smaller projects have been initiated in major cities of North India. In New Delhi the cancer treatment facility for the 1000 bed All India Institute of Medical Sciences is being developed in cooperation with the Rotary Club of New Delhi. The estimated cost of this project is to reach over Rs. 100 million. In addition a number of large hospitals and diagnostic centres have also been set up with NRI collaboration in New Delhi.

A sizeable number of large private hospitals have mushroomed in States like Maharashtra, Kerala and Andhra Pradesh over the last few years. In Maharashtra, Bombay has three or four large projects in the offing. The Hinduja business family from London is funding the expansion and renovation of their 100-bedded National Hospital to a 300-bedded modern general hospital with the latest diagnostic equipment. The hospital proposes to offer specialised services in opthalmic and orthopaedic surgery.

The Indian Cancer Society in Bombay has initiated the construction of a new cancer hospital which is valued at Rs. 200 million. Yet another 200-bedded hospital is being built by the Mahavir Health Foundation which is a charitable trust. The estimated cost of this project is Rs. 100.50 million and will specialise in cardiac and kidney diseases. The Bhatia General Hospital which is run by a private trust in Bombay has been expanded at a cost of Rs. 20 million with super specialist service like cardio-therapy, ultra sonic imaging and clinical analyses equipment. The mushrooming of private hospitals in Maharashtra is by no means confined to Bombay. Karad town in Satara district of Maharashtra has a 200-bed private hospital started with an investment of Rs. 30 million to provide for construction and initial costs. Since the project is located in a small town it is expecting to provide services to surrounding villages as well.

In Kerala there has been a state-wide boom in private hospitals. According to a survey conducted by the Bureau of Economics and Statistics in 1986, there were 1,953 government institutions with a bed strength of 38,133 as against 3,585 private hospitals with 50,766 beds.[2] While cities like Trivandrum and Cochin have their share of high technology medical centres, it is by no means restricted to the larger cities. In fact high technology medical care has

penetrated even into smaller towns and villages, in some parts of Kerala. According to a report it is not uncommon to find private hospitals in villages having scanning and diagnostic cum therapeutic equipment being used for treatment of patients.

Apart from big business groups and private trusts establishing hospitals with sophisticated equipment, regional business groups have also entered this arena. Apollo Hospitals Ltd, a Madras-based corporate concern was one of the first to establish a super specialist hospital in South India. Recently, the same concern has initiated another project in Hyderabad with an initial investment of Rs. 12 million to cover construction and equipment costs.[3] Several such projects are being initiated in Andhra Pradesh by business groups and private trusts in collaboration with Non-Resident Indians. Standard Organics Ltd, a Hyderabad-based corporate concern has also made inroads into health care. The Standard Organics Ltd which is essentially a pharmaceutical concern has diversified into leasing of medical equipment and have set up diagnostic centres in several major cities in the country.[4]

In a recent announcement a group of Andhra non-resident Indian doctors based in California are initiating super-speciality hospitals project in Hyderabad, Vijayawada and Visakhapatnam. The cost of each of these projects is estimated at Rs. 30 crores and will consist of over 300-bed hospital, 200 nursing quarters, 100 physician quarters, a hundred room three star hotel, a thousand seater auditorium and four lecture halls. In addition to providing super specialist services the foundation seeks to "bring about medical and health awareness in rural and semi-urban populace through continuing medical education programmes with accent on rural health.[5] Apart from these large projects a number of smaller ventures have already been initiated in the several major towns. In Hyderabad a local business group has initiated a super speciality hospital valued at Rs. 7.60 crores is nearing completion.[6]

Calcutta is yet another metropolis where some leading business groups from Madras have applied for permission to the government for land to build super specialist hospitals. In addition in a recent announcement the State is planning to hand over some 'sick' government hospitals to industrialists and NRIs in order to improve the functioning of these insititutions.[7]

Although this brief survey is by no means exhaustive, it is certainly indicative of the emerging scenario in the private sector. While it is well known that both the state-supported medical service and private medical care have been co-existing since independence, in more recent years the latter has been growing and diversifying. The private sector in health care comprises, clinics, small, medium and large nursing homes, hospitals, pathological labs and diagnostic centres. Increasing penetration of high technology equipment is making medical care a profitable venture and has provided a fillip to the expansion of this sector. As a result of this a number of large and regional business groups and doctor entrepreneurs are diversifying into this area. Institutions which use high-tech equipment are no longer confined to the metropolises but are penetrating semi-urban and even rural areas.

There are several reasons for the burgeoning of the private sector. Firstly, although the public sector has expanded considerably since independence, the meagre investments made by the state have been inadequate in meeting rising demand. This 'pent-up' demand is increasingly being met by the private sector. Secondly, the increase in incomes of the middle and upper middle classes, in recent years, has resulted in the demand for durables and luxuries which is reflected in medical care as well. Thirdly, advancement in medical technology has pushed up the cost of medical care making it a profitable business venture. This coupled with liberalisation of import duties on high technology equipment has led to mushrooming of medicare institutions across the country.

Quite clearly, the increase in imports of medical equipment has hiked the cost of medical care. Since most of the high technology equipment is employed for diagnostic purposes, testing has assumed an important role in treatment. As a leading specialist remarked "these days doctors depend excessively on sophisticated testing procedures which have often led to unnecessary testing". Although import of medical equipment is on the rise there has been no effort to either regulate the growth or prescribe minimum standards for the running of these enterprises. Given the profit motive of the private sector, the absence of checks and regulations relegates the welfare of the patient to a secondary position. With the increasing commoditification of medical care and the demand to treat it as an industry, it is mandatory that the government prescribe controls to regulate this sector, the absence of which, will only further distort the existing structure of medical care.

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Need for Alternative Medical Education in South Africa

r h philpott

Medical education was introduced in South Africa in 1922 and has since produced many eminent doctors. But today the universities are not producing doctors appropriately trained either for current needs or more disturbingly, for a post-apartheid future. There is an urgent need to radically transform the medical course and curriculum. (Reprinted from Critical Health, *1988)*

DOCTORS first completed their medical education in the University of Cape Town in 1922. The early medical teachers brought their curriculum with them, mainly from the United Kingdom. They produced many first rate doctors and in the decades since, many graduates have attained international acclaim. There have been a number of intra-university curriculum reviews but these have tended to add more and more to an already overfull course. In 1985, the South African Association for Medical Education (SAAME) held a national review of medical education in South Africa, but very few of the recommendations have had any effect on our medical schools. Our universities are neither producing graduates appropriate to the needs of our country at present nor, more disturbingly, for the post-apartheid future. This paper sets out some of the reasons why we urgently need alternative medical education to help solve the serious health care problems in this country, remembering that it will be six years after the new curriculum is established before the first graduates appear.

Maldistribution of Health Services

Doctors tend to practice in the kind of environment where they are taught and so it is understandable that they find their security in city practice, either in this country or overseas. It is true that it will take more than a changed education to entice doctors to practice holistic medicine in the neglected parts of our country, but if we don't change the education we provide, no amount of structural change in the health service will bring about improved health care for the people of South Africa. Doctors need to be trained in the context of where their services are needed most.

Not only does maldistribution operate geographically but also in the emphasis on specialities. For example, many specialist obstetricians with a minimum of twelve years of training spend the bulk of their time doing normal deliveries for extra-ordinarily high fees while primary health care for the poor is seriously neglected.

The major portion of clinical teaching is provided in referral, high-technology teaching hospitals, where the bulk of the country's health budget is spent. This gives students a view of health care that suggests that doctors only deal with rarities and that sophisticated monitoring systems and laboratory investigations are not only indispensable, but immediately available.

The teaching hospital glorifies high-technology curative medicine and surgery and gives limited consideration to preventive and promotive health. Role models have a major influence on the development of a medical student's approach to medical practice, and with the emphasis given to curative medicine and the down-playing of preventive and promotive care, it is little wonder that the same pattern persists in succeeding generations.

There is a need for a medical faculty to develop expertise in the various specialities but this does not promote the most appropriate basis for medical education. It has engendered unhealthy competitiveness for curriculum time, space and status. Each department advances its own course for survival sake and as a result produces a curriculum more suited to specialists in the discipline. Such structures are not suited for the undergraduate education of a 'core' doctors. Instead, there is a need for strong central departments of medical education that co-ordinate cross-discipline, integrated programmes of problem-based learning.

Medical students who graduate from our medical schools have every right to presume that health care is dependent primarily, or even exclusively, on doctors. Their doctor teachers in the hospital are on top of the pile and project other health workers as auxiliaries. Medical students are seldom introduced to other health workers, let alone train with them. Again it is understandable that our graduates have little experience of working in teams and that our country's health service is, in the words of David Werner (author of the book *Where There is No Doctor*) community oppressive rather than community supportive. Doctors are expected to have all the knowledge and wisdom and are not shown how to consult the communities they are meant to serve. They have been trained to be consultants before they learn to consult and to direct before they have learnt to serve.

The tenets of western medical practice are taught as if no other belief and practices have any place in a country with such a multiplicity of cultures. Our very failures should alert us to the need to examine others' successes and to incorporate them into new learning opportunities for our students. A salutary research study conducted in Zimbabwe needs to be heeded by our medical educators. Groups of 100 rural and 100 urban women (many of whom were university graduates) were asked where they would wish to be delivered of their next baby and who they would like as their attendant. The majority in both groups wanted the safety of hospital or maternity clinic but 100 percent of the rural and 90 percent of the urban woman preferred to have a traditional birth attendant (TBA) with them during their labour. Few doctors even

recognise that the overwhelming majority of women on this continent are delivered by TBAs. Instead they write off such patients as 'unbooked' or 'defaulters'. We interpret compliance as meaning taking the host of tablets we prescribe, in spite of the fact that we never explained what they were for. We also forget that our patients have an entirely different world view that informs their understanding of the aetiology and therefore treatment of illness.

Not only do we compartmentalise within our medical faculties, but we isolate the medical schools from all other faculties in the university. How can we expect students to accept other disciplines such as agriculture, economics, sociology and education as being important, if not more important, than medicine in providing health and wholeness of care? We even call one of our schools a Medical University, which is not only a contradiction in terms, but more evidence of our failure to understand what holistic health care is all about. The consequences are a country that can boast the first heart transplant while within walking distance of the particular hospital involved, there are townships with no piped water. The need for a multi-disciplinary approach to teaching extends beyond the compartmentalised medical school to cross the academic barriers in the university. It is only when engineers and agriculturists link with sociologists and physicians in formulating new curricula that the ill-health caused by factors related to each of these disciplines will be addressed. It all seems so obvious, but until we are brave enough to create new educational structures, our students will retreat into their academic enclaves instead of becoming the new pioneers of health care in Southern Africa.

This is not the language of our medical teachers. We are the privileged ones and we are comfortable with our elitist positions and the status quo and bureaucracy that protects our academic safety. Few of us have experienced the oppressive effects of apartheid, the major cause of poverty and ill-health in the midst of this land of great wealth. Without this experience, our teachers are unable to interpret the effects of state systems on community and individual health, and therefore demand that politics and health care be kept in separate compartments.

In spite of the fact that many of our students come from the oppressed communities, their awareness and understanding is not encouraged by the majority of their teachers, and the only oasis in the midst of a year of non-contextualised teaching is the annual Students Conference, at which academic staff are conspicuous by their absence.

The Medical Course

This statement hardly needs elaborating, yet we are all guilty of adding every new discovery to the curriculum, without taking anything out. Each new discovery should remind us that much of the content in today's curriculum will be out of date by the time our students are in practice and our volumes of content will not prepare them for the demands of the new century. We subscribe to 'Health for All by the year 2000' but are not equipping graduates to meet that challenge. Rather than multiplying content we need to provide students with problem-solving skills, for it is that they will be called on to do whether at the community or the individual patient level. Problem-solving will ensure a multi-disciplinary approach to medical education and will equip students to absorb and apply new knowledge as it becomes available. It will also ensure that each subject discipline is dealt with according to its merits, the merit of the solution to common life-saving problems in the first instance, and later, any other problem that may present itself. Students progress when they know how to explore knowledge rather than just memorise it.

We manage to drain every atom of motivation and enthusiasm that students bring with them by our layered curricula, which in the first three years can only suggest to students that life is filled with laboratories, cadavers and specimens in bottles. How much more exciting it is to see a small group of first year students deciding on the anatomy, physiology, pathology etc that they need to explore and learn to enable them to solve a particular clinical problem. By the end of a course of suitably chosen: problem-solving studies they will have not only learnt the principles and content of each subject in the curriculum but they will see how it all fits together in helping them solve the problems. Experience with such curricula has shown that students have to be restrained from over-studying rather than driven through the early years of boredom.

Medical schools are not entirely to blame for suppressing the natural spirit of adventure and exploration. The rot sets in at junior schools. Children, left to themselves, are experiential, self-directed learners until the schools get hold of them. From then on the teacher takes control, and presumes that all children learn at the same pace. Consequently they are regimented into large classrooms, told to keep quiet and listen to the teacher. The only difference at medical school is that the classes are many times larger and the teachers do not even hold an education diploma. My only surprise has been the rapidity with which fourth year university rote learners respond to the liberating experience of changing from an emphasis on whole-class lectures to the fun of problem-solving in small groups. We have shown that it works at that late stage of the curriculum, so why not start that way from the first year of the medical course?

Of all countries in the world today, South Africa in particular needs a liberated educational system. Not only is this the most appropriate way to learn but it equips people to seek after truth and justice in every sphere of their lives.

This outline of the need for alternative medical education in South Africa must point us in the direction of community-based, community-oriented, integrated, problem-solving education as the solution to our needs.

Socio History in Medicine

padma prakash

Medical curricula is in the long run determined by the socio-political needs of the class in charge. Even the content of these disciplines reflects these needs. This article examines the history and curriculum content of one undergraduate discipline in medicine—preventive and social medicine.

THE practice of medicine has undergone tremendous expansion and diversification. Several factors have contributed to the transformation of medical practice, some internal and others external not the least significant of which have been social, political and economic. From time to time medical education has reflected these changes in the practice of medicine. This amalgamation of current practice with training has not taken place in either a smooth progression or as a matter of course. For example while improved methods of diagnosis and treatment have become part of the training of medical graduates with relative rapidity, the growing body of knowledge in epidemiology and in the sociology of health and illness have been all but ignored in the undergraduate medical curriculum. This marginalisation of the sociological perspective has had consequences for the development of medical education and inevitably for the nature of health care.

It is the character of the dominant group/section/class in society which determines the trends and content of medical education. This dominance however, is not because of numerical strength but is a consequence of the historical development of society. Again, what constitutes the requirements of this dominant class is not just derived from the health characteristics of the class/group. For the requirements are rooted in the socio-political needs of the class in charge. In fact not only is the curricula determined largely by these factors, but even the content of these disciplines is tailored to match and sustain the ideological requirements of the dominant class. To illustrate, we examine in the following the history and curriculum content of one undergraduate department, viz preventive and social medicine (PSM). This is a relatively new field, having been introduced as a distinct discipline only in the second quarter of this century. In India separate departments of PSM were established only in the late fifties. What were the factors leading to the introduction of PSM into the undergraduate curriculum? What has been its orientation and what is its current content?

For the purpose of examining in detail the undergraduate curriculum content of PSM we have taken *The Textbook of Preventive and Social Medicine* by J. E. Park and E. Park as a typical illustration. The content preventive and social medicine can only be understood against this background. Specifically, we have looked at Parks' *Textbook of Preventive Medicine* assuming it to illustrate the typical curriculum followed in the department in any undergraduate course.

The textbook is divided into 18 chapters which don't appear to follow any particular sequential logic. A first chapter on what is presumably meant to be a history of medicine is followed with a series genetics and health, sociology and health, environment and health. In a sense of course, the chapterisation is indicative of the entire approach to the subject— that the understanding of the preventive and social aspects of medicine can be so compartmentalised. There appears to be no continuity between the chapters. This criticism will perhaps become clearer when we deal with these chapters in greater detail.

Our main criticism is that the book projects a certain picture of medicine, medical practice, and of the role of the doctor. This creates and reinforces an ideology which is biased against certain sections of society. Moreover it delineates for the medical graduate a methodology for understanding social phenomena which views society as a static, rigidly divided structure. According to this viewpoint the components can each be studied separately, can even be modified, improved, changed. For instance, that health behaviour can be changed without altering the social location of the individual or family concerned. This affords the right grounding for the view that medical solutions can not only be independent of social factors, but in fact they over ride the latter and can even affect social change. While undoubtedly medicine in history has contributed to socio-cultural changes, that it has itself been a product of society is something which is entirely missing in this world view projected by textbooks such as Parks'.

Simultaneously, the book also projects society as a homogeneous entity where everyone has equal access to the conditions which make for health. There is no recognition of the fact that health status, especially in third world conditions is an indicator of the class location (20). This may be best illustrated by the manner in which the authors discuss the problem of malnutrition. Socio-economic factors are listed only as one among the many aspects of the ecology of malnutrition.

The text manages to de-emphasise the fact that malnutrition especially under-nutrition which is the major problem in India, is largely rooted in the lack of purchasing power of certain sections of the population which in turn is again both a cause and consequence of the lack of political power to demand and obtain the wherewithal to lead comfortable lives, live in healthy surroundings and work at non-hazardous occupations. Leave alone the issue of class in society, the book does not even admit sex discrimination in society. Surely a book published in 1985 cannot claim to be

unaware of data on this matter. Any number of studies have shown that women suffer to a greater extent from the problem of malnutrition than do men. Again, in dealing with tuberculosis, the book fails to acknowledge the class-wise distribution of the disease, even though the age and sex trends, time trends and the rural-urban differences are remarked upon.

In general the book tends to medicalise all problems concerning health. Such as for instance malnutrition. Clearly, a social problem it is regarded as a 'medical' problem with social causes and repercussions. Even worse is the way the authors treat mental illness where although social pathological are listed— only third to organic and heredity— the solutions offered stress mainly early diagnosis and rehabilitation just as in any medical problem. The point is except for a small proportion of cases which have organic and hereditary roots, the majority are symptoms of social distress which become manifest in individual aberrations. They can hardly be resolved by 'early diagnosis' of individual cases. The solution lies in the early diagnosis of social distress, which clearly according to Parks is beyond the purview of the doctor.

Not surprisingly, the solutions offered by the authors to any of the range of health problems are either individualist or abstract. That is, what the individual can and must do to avoid falling ill or how the government or more often the health services can offer appropriate measures. That prevention of illness can most effectively be brought about through social action of a group or community. Thus it completely misses out the crucial role the doctor can play in such action by providing the group or community with information etc. In fact right through the book the doctor is regarded as a person being apart and slightly above the rest of society.

Let us now look more closely at some of the chapters in the book. The first, purported to be a history of medicine runs to nine pages. It is pertinent here to note that this is the only department in the undergraduate medical course where the history of medicine figures at all. It was in 1955 recommended the introduction of history as part of the PSM curriculum. In Parks' textbook we have a travelogue through time, enumerating the `advance' of medical knowledge rather than an account of the dynamic interrelationship between medicine and society. The authors' approach is a historical dealing with the developments not in time periods taking into account the social and economic structures of the time, but rather as geographical categories. We have for instance, paragraphs dealing with primitive medicine, Indian medicine, Chinese, Egyptian, Greek and so on. This gives a false notion that the growth of knowledge in medicine has been circumscribed by boundaries of nations and states. In fact, although there were characteristic developments in different countries in numerous periods of history, there has also been a process of dissemination and assimilation between the various centres of civilisation. Modern medicine has its roots in this body of knowledge even though today it may bear little resemblance to it. In consequence the contributions of early medical practitioners and thinkers such as Hippocrates, Galen, are regarded as distinct and separate from that beginning with say, Parcelsus (who "publicity burnt the works of Galen and attacked superstition and dogma in medicine"), Vasalius ("who demonstrated some of Galen's errors") and Ambroise Pare (who "revived surgery and became the father of modern surgery"). While it is true that developments in medicine after the sixteenth century represent a break with the past, the continuity of empirical traditions which is so characteristic of the field does not feature in the narration.

The middle ages ('dismissed by the authors of the book as the dark ages'[1]) saw the development of two distinct traditions of medicine, which were to become competitive in a later period. The inflexibility of the codes of the Catholic church, the widening gap between Church medicine and the people, the famines and plagues, the growing impoverishment provided an impetus for the growth of a more accessible cheaper medical care. Folk medicine which had continued to exist outside the Church, largely in the hands of women, began to encroach upon Church medicine [2] Many historians have seen the witch hunts which were rampant in Europe in the tenth to fourth centuries as the manifestation of the attempts by the Church to usurp the folk knowledge and quell the competing tradition of medicine, one monopolised by the rich feudal lords, the richest of them being the Church, and the other practised by and accessible to the lay poor[3].

Park reviews the beginnings of modern medicine, that is in the 16/17th centuries without ever referring to the tremendous changes that were occuring in the social fabric of the time. So great was the intellectual impact of these discoveries in the field of medicine, that they in turn influenced other sciences and social ideas as well. For instance William Harvey was the first to consciously use scientific methodology in the biomedical sphere. He also used concepts of quantification to arrive at a hypothesis. And used the concept of the human body as a mechanical system with the heart as pump. These are concepts which are integral to clinical medicine today.

Parks' history fails to recognise and trace the ideological trends which are current to this day in medical practice. This would have been possible only if the dynamic interaction between medicine and society is admitted. For example, the predominant social structure of society, cultural practices and prejudices of the seventeenth to the nineteenth centuries, were assimilated in some form or the other into the concepts and content of modern science and medicine which were then evolving.[4] Not surprisingly, medicine's model of a 'normal' human being was a white, adult male. By definition, therefore, women and non-whites were 'abnormal'. These ideas have influenced the development of medicine and set limits on the understanding of particular

pathologies and illness syndromes. Similarly, the mechanistic concept of the body as a machine, as distinct from the mind was to limit the growth of medical knowledge for generations.

At the same time because medicine adapted the dominant ideas of the period, and because it continued to retain its long-standing status in society, it was used to reinforce and substantiate these social myths. Thus for example, because women were by definition all physiological, conditions experienced by them, menstruation, childbirth etc, were regarded as being abnormal and treated as illnesses.[5] Society in turn promoted and perpetuated these ideas by taking resort to medical opinion. This fact that throughout history medicine and its practitioners have largely been oriented towards supporting and sustaining dominant ideas, often to the detriment of the socially oppressed classes is an important aspect of history unfortunately given a miss by Parks' textbook. In short, the first chapter of the book is a disoriented, disjointed account of history which really ought not to have been there at all. If at all the history of medicine is to be taught to medical students, it ought to receive a more coherent, sociological treatment than the one presented here.

Sociology of Medicine

We now look at two chapters which give us an idea of the sociological concepts presented by the authors. The book deals with sociology more as a set of terms to be defined rather than as a body of knowledge with a long history. Like other disciplines sociology too, a plethora of theories, orientations and schools of thought have richly contributed to its development. Park however, is either unaware of these developments or regards but one school of thought as being important. This approach will undoubtedly leave the medical student with a slightly jaundiced view of the discipline. More importantly, the book does not deal with methods of sociological analysis which are so necessary for the delivery of health care.

The chapter on 'sociology and health' deals with the following "concepts in sociology": society, social structure, social institutions, role, socialism, socialisation, social control mechanisms, customs, culture, acculturation, standard of living, social problems, social pathology, social surveys, case study, field study, communications and social defence in that order. Need we say anything at all about this? One is hard put to understand the logic and the purpose of such a list of 'concepts'. Admittedly these are terms which need to be explained, but they are not concepts. Even the terms cannot be understood by mechanical definitions. Each has to be understood historically, its meaning often having changed with time and the context. Moreover, even the choice of 'concepts' so defined appears biased. Such important concepts as social movements, or social change and what they constitute, do not figure here.

It is also significant that in defining social structure the inherently conflicting relationship between classes (or strata, as Parks would call it) is not recognised. The fact is that some groups are more empowered than others and that these power relationships cannot be altered without shaking the very roots of society.

Society has been defined in a number of ways by different sociologists. In the evolutionary model all societies pass through definite stages of development. For some social thinkers like Durkhiem the most important dimension of society is the degree of specialisation within it which is progressively complex as societies pass through the different stages. In the structural functionalist model it is the interrelationship of social institutions rather than the individual or group which is to be emphasised.[6] Talcott Parsons modelled his conception of society on the theory of homeostasis and saw society as constantly attempting to balance its equilibrium by automatic adjustments when upset by internal or external forces.

Parks' textbook appears to have no use at all for this variety of ways in which thinkers have understood society. This is even more true of the other 'concepts'. Certainly it is utterly ridiculous to try to define socialism in 14 printed lines.

What little there is of sociology in the textbook is almost entirely Parsonian. Talcott Parsons developed the concept of the sick role in his writings have greatly influenced medical sociology. According to this understanding there are four essential aspects of the sick role— the sick person is exempted from his normal social role responsibilities; the sick person cannot help being ill; the sick person is expected to get well as soon as possible and finally he is expected to seek help in getting well. Parsons therefore emphasised the need to control sickness. Consequently, social control is clearly a function of the medical establishment.[7]

Not surprisingly of course, the textbook deals with social institutions such as the family as being "the most powerful example of social cohesion" which have existed in all societies. "The family is a primary unit in all societies." It is well-accepted today that the family, defined as the authors do viz, "a group of biologically related individuals living together and eating from a common kitchen." was not in fact a primary unit in all societies. Quite clearly, the Parks notion of the family is patriarchal: "The family is a bridge between generations and between fathers and sons." And again, "The family provides social care by ... giving status in a society to its members ie use of family names..." At one point the book talks of how the "freedom of wives" has enlarged and of how "the young wife in India...brings to a marriage not only a dowry but a professional or semi-professional education and she seeks a professional career." There are several points to be made here. First, the changing family structure is a consequence of a number of factors, economic, cultural and social and second, the status women in the family and their role, as well as the functions of the family are not universally the same. Even within one

country they vary with class, region and culture. And third, while it is true that dowry is a widespread phenomena, to refer to it as an inevitable and accepted feature of society is not quite correct.

The discussions on the family in the textbook are particularly important because 'social and community medicine' confers a significant role on the family in disseminating its message. Thus for instance, the family's traditional role or rather the role of the women in the family, in child bearing, health and nursing care, are the via media through which ideas can be propogated from generation to generation, thus ensuring the perpetuation of the social structure as it exists currently.

Another chapter which is a hotch potch is the one on community health. After attempting to define health in a crudely mechanistic way and outlining the relationship between health and development, the chapter moves on to a definition of disease— the interaction of the agent, host and environment etc, and then on to a description of health situation and the health services. While such an explanation for understanding disease may be useful, it can also tend too mechanical. Evidently the result of the interaction of the three is often much greater than the sum of the three. Moreover, it is not possible to change the nature of one without inevitably altering the other two. Altering, say the disease agent may not be possible without simultaneously changing the characteristics of the other two.

Nowhere in all this do we find a definition of community. This is a concept which has created much discussion among sociologists. If by community is meant a group which shares common socio-political features, then a village comprises several communities and it is absurd to talk of a village community as if it is homogeneous. Community medicine is a meaningless concept if 'community' is not defined.

To sum up, in this book preventive and social medicine has the following characteristics : (1) Ill health is viewed as a consequence of the interaction of man and nature where the changes in the latter are beyond our control. The essence of medicine is to help 'man' make the necessary changes so as to balance the changes in nature. (2) The activities of the individual are the major reasons for ill health — viz, use of unclean water sources causes typhoid, cholera etc, smoking causes cancer, inadequate iron intake causes anaemia, babies die because mothers don't breastfeed, workers die because their work environment is unhealthy and so on. The object of PSM is to teach medical students to help individuals, alter their lifestyles without damaging social institutions and norms. (3) The social and political forces in society do not significantly affect the development of medicine or health policy, and the history of thought (including medicine) may be viewed as a set of isolable, distinct phases with little spillover. (4) society is generally uniformly cohesive. Although there are groups and stratas, they do not have inherently conflicting interests and may live together in peace and health. (5) The human body is a mechanical system and organs are component parts which may be repaired or replaced. In the same fashion all health problems may be reduced to the malfunctioning of a particular part of the subsystem. Biological man rather than the social human being is the ideal. (6) Health is defined and understood in terms of an individual's productive capacity and not the quality of life. By this definition, a worker is termed healthy as long as he can achieve a certain level of productivity. The individual must therefore be helped to maintain this level of productivity irrespective of whether he feels healthy. In short, PSM justifies existing socio-economic and political formation by arguing that the aberrations seen in the system are not intrinsic to it but are a result of individual behaviour and may be smoothed over by persuading individuals in 'communities' to accept their fault and remedy the situation. An approach to medicine which has the potential to show up the inherent contradictions in patriarchal class society which in reality determine the health status of a society, has effectively been defused.

The exercise undertaken here is only illustrative, but it does indicate that the orientation of preventive and social medicine reinforces the socio-political framework which papers over major contradictions in society. It helps to justify existing socio-economic and political formation by arguing that the aberrations seen in the system, in this case in the health status of the population, are not intrinsic to it but are a result of individual behaviour or minor faults which may be smoothed over or repaired. If the practice of medicine is to become more relevant, it is here in the department of PSM that the restructuring must start.

[This article is an abridged version of a paper appearing in an anthology on Medical Education published by the Medico Friend Circle. (In the Press)]

Notes

1. J D Bernal in fact delineates the significant contributions of medieval Christiandom to science while at the same time cautioning against the trend to glorify the period. Modern science grew out of the superceding of the medieval world picture (*Science in History* Vol II, Penguin)
2. See *The Political Economy of Health* by Doyal and Pennel, Pluto Press London.
3. Leo Huberman *Man's Worldly Goods*, 1968 and Hughes Pennethorne, *Witchcraft*, 1965, Penguin.
4. See Brian Easlea, *Science and Sexual Oppression*, 1981 for critical reading of nineteenth century biology and Hilda Smith, 'Gynaecology and Ideology in 17th century England' in *Liberating Women's History* by Bernice Caroll 1976.
5. Barbara Ehrenreich and Deidre English, *Witches, Midwives and Nurses*,. Glass Mountain Pamphlet, 1980.
6. A brief but comprehensive introduction to sociology which defines the canvas of the discipline is Alex Inkeles, *What is Sociology?* published by Prentice Hall in the Foundations of Modern Sociology Series, 19
7. Talcott Parsons, *The Social System*

An Uneasy Relationship

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Law and Medical Ethics by J K Mason and Smith McCall R A, Butterworth 1987 (Second Edition), pp 344, $ 12.95. It should not be correct to say that every moral obligation involves a legal duty, but every legal duty is founded on a moral obligation — Lord Chief Justice Coleridge in R.V. Instan (1893) 1QBat 453.

THIS second edition of the book takes account of recent legislation and much of the text, including chapters on reproductive techniques, consent and euthanasia has been rewritten. There is also a new chapter on the treatment of the elderly and the Mental Health Act 1983 is also considered. With the introduction it covers five major topics viz: reproductive medicine, medical practice, death, research and experimentation and psychiatry and the law. The list of cases and table of statistics along with appendices is also given.

The first section on evolution of medical ethics briefly follows the progress through the earlier periods to the organisation of modern medicine. This section also introduces medical ethics and legal intervention in medicine. The crucial question raised is that of determining the extent to which medical decisions should be the object of legal scrutiny and control. Two extreme views exist, one that holds that the medical profession should be left to regulate itself and that it alone should decide what is acceptable conduct. The contrary view expressed, denies doctors the right to regulate their relationship with their patients ie reserving for the medical profession the right to decide on issues of life and death is an improper derogation from an area of legitimate public concern and an encrochment by clinicians into what is, properly, social policy. Broadly speaking these conflicting views are those of two groups representing the medical profession holding the first viewpoint and the patients who are treated by these medical professionals holding the latter view-point. The legal system then is faced with the classic problem of doing justice to both parties. The fear of the medical profession must be taken into account while the legitimate claims of the patient cannot be ignored.

The second section dealing with reproductive medical covers (a) A Reform of Sex Law? (b) Modern Reproductive Technology (c) Control of Fertility (d) Abortion (e) Prenatal and Wrongful Life (f) Neonaticide and selective treatment of the newborn.

Under the topic a reform of sex law, this book deals briefly with application of law with regard to sexual intercourse, rape, homosexuality, incest, transexualism etc. "Full expression of ones sexuality is now advocated in some countries by responsible educational authorities. Medical knowledge and expertise are moving to serve the changing needs of people. It is doubtful on the other hand if our present sex laws to accurately reflect current public mores". The topic of rape ie sexual intercourse without consent briefly but concisely brings out various issues related to the subject. They almost take a stand when they state "our feeling is that 'rape' is essentially an act of violence in which sexuality plays only a secondary part. It also brings out the outdated existing laws in the United Kingdom where rape, to be raped requires intercourse per vulvam.' There is a brief mention of approach to rape in different countries. There is a humane though condescending attitude taken by the authors towards homosexuals and transexuals. As for incest when it is sexual abuse on children by a trusted elder then there can be no place for law that protect such abusers.

Modern reproductive technology has been extensively covered in this book. Being a very sensitive issue needing intense consideration of both legal and ethical issues. The authors seem to be taking a very practical view when they state 'methods are now available for by-passing the natural process. Almost inevitably, these sometimes conflict with laws which were mainly fashioned before such techniques were considered.

If we look at the different reproductive techniques offered at their exorbitant rates, it is a highly commercialised process. So let us not be under the impression that it is concern for childless couples that such techniques have emerged. Why are absurd techniques like amniocentesis in vogue today? Is it to help facilitate female foeticide under the garb of helping correct genetic defects? Why should fascist ideas of eliminating imperfect foetus be encouraged? In almost all cases the woman who has to go through all the painful procedure has someone else making decisions for her. The major being the 'stigma' attached to being infertile. Surrogate motherhood is a mockery of motherhood the way it stands today. The word someone had coined 'technological adultery' would more apt here. There is so much about abortion and laws relating to it. Why is not the woman left to decide whether she wants to abort or not? It is her body, her right to decide. If the socio-economic pressures are the main reason a woman goes in for abortion, why aren't laws passed to deal with exploitation that is going on. Instead of whether the heart was beating at the time the foetus was aborted?

The chapter on medical practice looks into issues relating to medical confidentiality, consent to treatment, treatment of the aged. The above mentioned issues are points of con-

flict between law and medical ethics. The authors have presented the issues illustrated with actual cases. Laws relating to medical ethics emerged as a safeguard against exploitation by of the medical profession. Being a reflection of the capitalist social structure, compensations (torts) will be demanded for medical malpractices. It is inevitable because the patient has his/her right since they are paying for the services. Counsel regarding treatment of the aged is a clear indication of the economic climate and is unlikely to be followed in the foreseeable future.

The topic on 'Death' deals with diagnosis of death, donations of organs and transplantation, euthanasia Biomedical human experimentation, Research on children and foetal experimentation. Issues over which medical profession could exert their power. Euthanasia whether active or passive, voluntary or involuntary is reflective of a person's right to life. The question I would like to raise is whose life is it? Donation of organs and transplantation is once again based on financial gains except a few philanthrophists who would donate organs from the goodness of heart. Though research is necessary for its benefits to humanity, the way it is used for commercial purposes leaves one aghast. Then we need to look within, to question our motives.

The extent to which psychiatry can operate as a political or social weapon constitutes its importance in the current debate. A broad sympathetic view may prevent the unjust punishment of those who are truly not responsible for their action but it may also prove to be socially damaging if criminals are left free under the garb of insanity. The inescapable task then becomes one of charting a course between Scyulla and Charybdis. To achieve this the criminal law should adhere to a broad definition of insanity (such as in Scottish or French formulae : refer page 307) which allows maximum leeway for a court to take into account expert evidence while at the same time avoiding necessarily being bound to an acceptance of psychiatric notions of reponsibility.

This book is a good reference volume with its pragmatic approach to different issues illustrated by actual cases. It covers topics relating to law and medical ethics in United Kingdom. These issues can hardly be considered applicable in Indian context where law itself if negligent, let alone medical ethics.

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(Contd from Pg. No.4)

peatedly stressed that scientists and technologists ought to accorded higher status and emoluments. The Shrivastava ommittee, MCI and other highly placed authorities unuivocally recommended non-practising terms for the edical teachers. The administration has not taken their commendations in the right spirit. There has developed a xus of mutual interest between the political-bureaucratic thority and the teaching community. Politicians of all ades and bureaucrats enjoy the free services of teacherecialists who also make the costly medicare facilities of e state hospitals available to the former out-of-turn. It is deed difficult to find a political leader or a high governent official who is not personally obliged to a medical acher. In fact, one of the topmost physicians of Calcutta enly maintained unauthorised private practice throughout e entire length of his service career occupying nonactising posts, which included the topmost posts in the st-graduate medical college and the health service in West engal: this enterprising doctor professionally served the ief ministers and ministers during both Congress and Left ont regimes. Unless this pernicious system of private actice is removed, other measures will be infructuous. ll discriminations in the matter of pay, promotion and reement benefits should be resolved. More and more unirsity control should be introduced replacing government ntrol. There should be a declared policy of transfer in nsferable services. Lastly and most importantly, there ght to be a system of assessment of performance accomnied by incentives and disincentives. This is perhaps the ost controversial area and difficult to operate. Because, edibility of assessment depends upon the credibility and mpetence of assessors. Still, a structural framework for ements and procedure for assessment could be devised and given a trial. If this is done, then the present system of aminations based on subjective assessment could be rown away and be replaced by periodic objective assessent of students at every crucial level of curriculum and aining.

The task of updating of knowledge should not be left to dividual initiative. Updating includes revision and is pendent on research. It may be emphasised that the aching community is the most effective force in research d the poor state of medical research in India is actually a flection of the teaching community.

The Bhore Committee observed in 1946.

"No special facilities are available for the training teachers in the different subjects of the medical curriulum. . . Broadly speaking medical research receives little no attention in the medical colleges of India. The thorities responsible for staffing and financing the medi- colleges are usually ignorant of the importance of search in relation to the achievement of a correct attitude mind in the students. . . " The role of teachers in shapg the make-up students is crucial and nowhere is it more pronounced than in the field of medical education. The attitude towards both science and society is involved. The student is influenced not only by the teachings and preachings of the teacher but is influenced most by the teacher's practice. The teacher's admonition against indiscriminate use of antibiotics or random use of steroids cuts little ice with the student when the latter discovers the very teacher's indiscriminate and random prescriptions in private practice. The student thus learns the difference between theory and practice and this influence is intensive and sustained, shaping the professional career and attitude of the student. The teacher's conduct, in its turn, is detemined by his/her position in the society and the profession. Social and economic compulsions dictate terms. In the conflict between pursuit of science and commercial gain, the latter generally prevails. Medical education cannot wait for the development of the intrinsic goodwill of the teachers. Unless measures are taken to ensure job satisfaction, medical colleges will always remain short of dedicated teachers. Unless the standard of teachers is improved, teaching can never improve and consequently medical care cannot improve, however, grandiose or rational might be the curriculum or methodology of teaching. Unfortunately this profound role of teachers in medical education is yet to be recognised in India.

Ajoy Mitra
Sujit K. Das

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We regret that the last few issues of the *Radical Journal of Health* have been delayed. This has been because of printing and other difficulties, none of which fortunately are insurmountable. We hope to bring the publication up-to-date in the next couple of months. Please bear with us!

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On Eliminating Quackery

The laws against quackery were intended to protect physicians in their special interests, to secure their curative privileges; the patients were put under the guardianship of the government, of the patronising police state. The modern state which is to establish the equal rights of free citizenship must therefore, automatically be against the maintenance of the law of quackery. . .

. . . We must (now) ask how the state. . . can and shall prevent quackery. For it cannot be denied that it lies in the public interest to restrain as far as possible the treatment of patients by ignorant persons.

The main tool of democracy is education. If we raise the educational level of physicians as well as that of laymen, quackery will correspondingly become less frequent. The more perfect the educational institutions of the state, the more scientific and practical medical education, the stricter and the more careful the medical examinations, the more realiable will be the physicians, "accredited by the government" and officially recommended to the lamyen and the greater will be the confidence they will meet and acquire. . . . But just as important, or perhaps even more so, is the education of the layman. As long as our schools devote their main efforts to the transmission of certain types only of knowledge and of doctrines consolidating belief in authority, in the best of cases, producing a sterile scholarship; as long as education, from primary school, to university is not throughout based on perception by our senses, as long as it does not aim to maintain and increase by critical faculty and by the power of independent thought, a sound, genuine and unadultered human understanding side by side with a large fund of positive knowledge in the natural sciences and in natural history, the basis will be lacking which would enable the layman to form his own judgement on his physicians and pseudophysicians. Not only the uneducated but also the educated laymen, the common as well as the outstanding people, will remain servilely subordinate to medical authority and a resounding title such as a privy court, or sanitary counsellor will constitute a most lucrative shingle for the medical quack. . . . Let a few generations pass — and that which now appears as just a logical postulate, as a pious wish will turn out to be an actual necessity, a cultural achievement.

— Rudolf Virchow

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